C. George Sandulescu

Constraints on Discourse



Edited by
Lidia Vianu

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This is a difficult book, and to minimize the difficulties, we must try to give as many definitions as possible. Discourse is a language unit, analysable with the same methods as the sentence, but larger than the sentence.

For example, a question is a sentence, the answer to that question is a sentence, but the question and the answer taken together within the same context are a discourse. The great problem is that linguists cannot usually handle discourse. They can only handle sentences. And the top example of linguists in that context is N. Chomsky.

In consequence, the discourse analyst must get accustomed to operate within different dimensions. This book suggests dimensions, it does not impose them. And it must be said strong and clear that the most important factor in discourse is presupposition. Now, you must have it very clear in your mind that presuppositions are concepts of logic, not of grammar. Therefore, with discourse we are slowly, or more rapidly moving away from conventional grammar, and getting closer to different ways of looking at language.

It is only after having studied this book that you can begin to understand—if you have some

Aveți în față o carte dificilă: pentru a uşura înțelegerea, va trebui să recurgem la cât mai multe definiții. Discursul este o categorie a limbajului: el poate fi analizat cu aceleaşi metode ca şi propoziția, dar este mai cuprinzător decât ea.

O întrebare, de exemplu, este o propoziție, tot aşa cum şi răspunsul la întrebare este şi el o propoziție: pe de altă parte, dacă luăm întrebarea şi exemplul împreună, în acelaşi context, ele devin discurs. Marea problemă este că lingviştii nu ştiu să opereze cu discursul. Ei operează cu propoziția. Cel mai de seamă lingvist din această categorie este, desigur, N. Chomsky.

Prin urmare, analiza discursului operează cu dimensiuni de cu totul altă natură. Volumul acesta le sugerează, dar nu le impune. Trebuie subliniat însă faptul că cel mai important factor în interiorul discursului este presupoziția—care este, cu siguranță, un concept al logicii şi nu al gramaticii. Prin urmare, discutând discursul, ne îndepărtăm cu paşi repezi de gramatica convențională şi ne apropiem de alte moduri de a cerceta limbajul.

Abia după ce veți fi studiat această carte veți începe să înțelegeți—dacă sunteți pregătiți să faceți acest lucru—că discursul are

intelligence—that discourse moves into various branches of logic rather than within what antiquity called grammar. The future lies with discourse, and the constraints are the restrictions we impose on the text, which are not exactly restrictions of grammar, though sometimes they may coincide.

The only thing I can say is: Forget grammar! Learn the principles and the restrictions of logic! Good luck.

de-a face cu ramurile logicii, şi nicidecum cu ceea ce se numea „gramatică” în antichitate. Viitorul este al discursului. Constrângerile sunt acele restricții pe care le impunem textului: ele nu sunt gramaticale, cu toate că pot fi şi de această natură câteodată.

Nu pot decât să închei cu un îndemn: Lăsați gramatica deoparte. Studiați principiile şi constrângerile logicii! Vă doresc succes.

George Sandulescu

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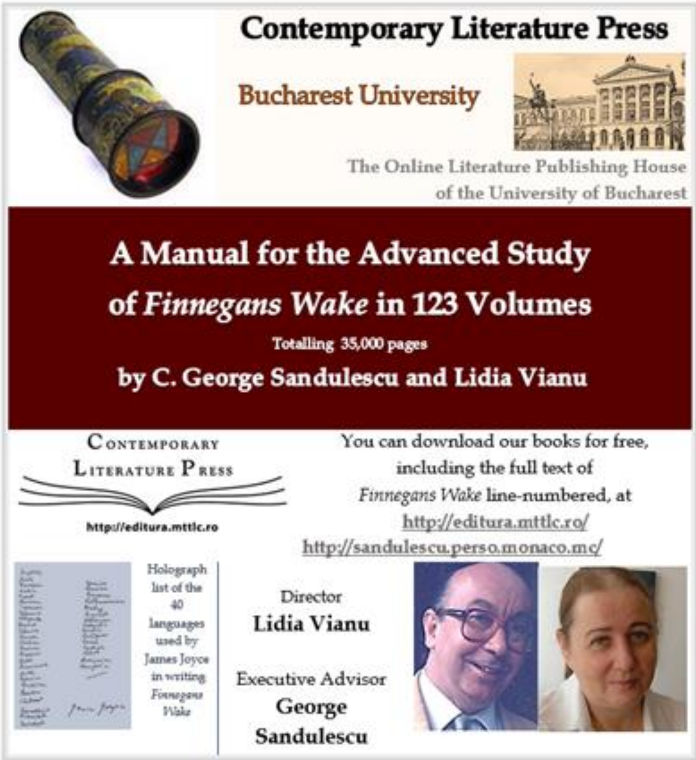
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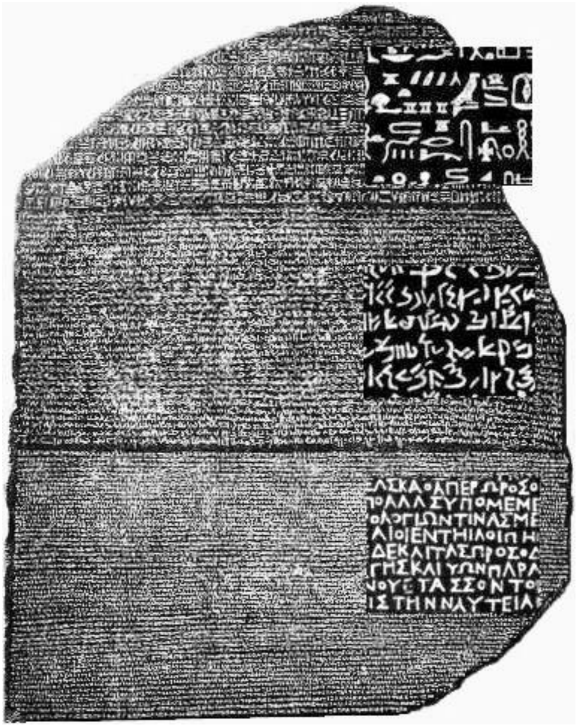
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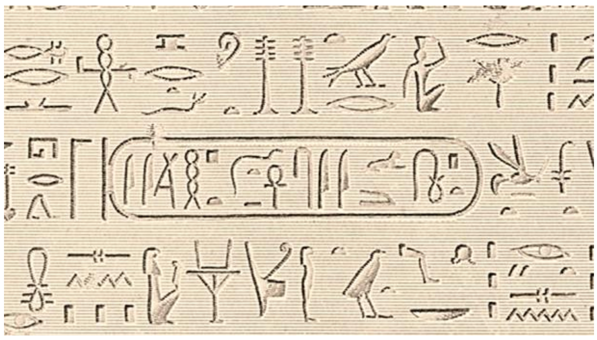
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Part One
Theory of Discourse





Cartouche

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1974. Stockholm

Prerequisites for an Integrated Theory of Discourse

0 **Epigraph:**

Everything that can be thought at all can be thought clearly.
Everything that can be put into words can be put clearly.
Wittgenstein, *Tractatus*, 4.116

1 **A discourse is a multi-sentence.**

1.1 "Sentence grammars cannot account for many relevant phenomena of natural languages (Note 1) in a sufficiently general and consistent way."

Note 1: e.g. (a) the structure of sequences of connected sentences, (b) pronominalization, (c) referentialization, (d) semantic relations, like (d1) synonymy, (d2) presupposition, (d3) entailment, (d4) inference etc

2 Discourse forms a separate LEVEL of linguistic description.

2.1 Discourse is superordinated in relation to Text: Text is subordinated in relation to Discourse.

2.2 A Text—by assumed definition—does not evince directly analysable suprasegmentals, e.g. Key, etc or paralinguistic (in the TRAGER, not in the ABERCROMBIE sense) features.

3 A discourse is a multi-sentence: in this sense, it comes nearest to (a) Texteme, and (b) Sequence, particularly in the written mode.

3.1 The category of Key has been specifically devised to cope with discourse suprasegmentals.

3.2 Suprasegmental parameters, such as Key, seem to have such significance in the analysis of spoken discourse that a discourse typology might even be set up on the strength of evidence coming exclusively from the area of suprasegmentals.

4 **There are two fundamental approaches to language study: (a) a data-bound approach, and (b) an intuition-bound approach.**

All other approaches, and/or methods, and/or labels are ultimately reducible to either (a), or (b), or both.

4.1 **STATEMENT**: "No sharp separation line between theoretical text linguistics and applied text linguistics can be drawn; such a clear-cut division analogous to, say, that of theoretical linguistics and applied linguistics does not seem to be appropriate in any case."
COMMENT: There are no clear-cut divisions in linguistics. At all.

4.2 An exclusively intuition-bound approach can never lead to conclusions directly and minutely reflecting discourse data.

5 **Spoken Discourse postulates Participant Boundary as one of its cardinal categories.**

6 "There is the domain of the sentence, and the domain **beyond** the sentence; there is no particular reason why the rules of one should duplicate or even resemble those of the other."

6.1 Discourse is structured; the sets of constraints operating in discourse are reminiscent of restrictions operating at sentence level, but neither identical, nor similar to them.

6.2 A discourse is semantically structured on the basis of (a) assertions, and (b) presuppositions. In addition to syntactic and stylistic constraints of the

conventional type, a discourse is also characterized by a set of pragmatic constraints (which have so far been either neglected or insufficiently investigated).

7 **“Syntax realises meaning, but does not organize it.”**

8 “Structure—as we normally understand it—is frequently a confusion between two different aspects: one being prospective (looking forwards, and influencing what happens afterwards) and the other being retrospective (looking backwards, and influencing what has gone before).”

9 “Any linguistic descriptive apparatus of the conventional types selects form the patterns that **can** bear meaning the patterns that **must** bear meaning, and therefore, ignores the rest.”

9.1 The written mode of discourse is characterized by patterns clearly divergent from those of the spoken mode in that it focuses solely on ‘patterns that **must** bear meaning’.

10 **Discourse Analysis must needs be able to cope with heterogeneous—not merely homogeneous—structures.**

11 All dynamics of **Topic and Comment** (alias Theme and Rheme) ultimately operates at the level of discourse and is the direct outcome of discourse structure: this is in fact what Topic & Comment is about.

11.1 Topic/Comment Analysis (as well as Theme Dynamics) have to do with the surface structure of specific types of discourse.

11.2 All discussions of **Style**, for much the same reasons, are ultimately discussions pertaining to discourse structure.

11.3 A consistent theoretical model of discourse as a **LEVEL** of linguistic description might radically change our conventional notions of Style, Context, Deictics, and perhaps a few others.

11.4 The notion of context, in at least some of its more divergent meanings, could be completely incorporated into the notion of discourse. We would then be able to rephrase it either as 'foregoing discourse' or even as 'subsequent discourse'...Or, both simultaneously.

12 One of the important aspects of discourse structure which has been greatly neglected is **Tense**. The inability of conventional linguistics to cope adequately with, say, the Sequence of Tenses is evidence of its inability to cope with discourse structure.

13 The category of **Participant Boundary** (implicit in the definition of Move) and, deriving from it, the existence of unified structures across participants are essential theoretical constructs for an adequate description of Spoken Discourse. All conventional linguistics has consistently failed to accommodate this notion.

13.1 The following micro-sociolinguistic categories, highly relevant to the analysis of spoken discourse, justify incorporation into the theoretical apparatus (quite regardless of their momentary rejection by symbolic logic): **Role, Role Structure, Role Repertoire Repertoire Range**; **Turn, Turn Taking**; Participant Boundary; **Adjacency Pair**, and a few others.

14 **An Exchange X fulfils the condition of Appropriateness if, and only if, Move M2 shares the same set of (Pragmatic) Presuppositions P1, P2...Pn with Move M1.**

15 **Connectedness** in Discourse Analysis is a possible and probable counterpart of **well-formedness** in sentence linguistics.

15.1 Within the framework of the present theory, **Connectedness** is aimed at replacing the earlier concepts of cohesion, coherence, and congruence.

15.2 The question of degree of connectedness (or disconnectedness) of a discourse is ultimately a pragmatic value judgment, and as such, it should be simultaneously placed within the frame of reference of (a) Discourse Analysis, (b) Pragmatics, and (c) Axiology.

16 I distinguish between Connectedness and Appropriateness of a discourse in that the former is exclusively **internal**, whereas the latter is partly **external** to the utterance.

17 Research strategies ultimately mean research politics.

17.1 Research politics is the coverage of research alternatives, intimately coupled with circumstantial selection of one particular alternative or set of related alternatives. The selection process is, as a rule, idiosyncratic at individual, group, and societal level.

17.2 There is a close interrelationship between the selection of research strategies and the question of ideologies underlying a given scientific set-up.

18 Each of these Propositions may and should be expanded into comprehensive elaborations on the basis of circumstantial evidence provided by the data, thus leading to the realization of relatively separate and independent units; such units may be spoken, or written, or both.

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1974. Uppsala

Going beyond the Sentence

(A talk given on Thursday 12 December 1974 within the Department of General Linguistics of the University of **Uppsala**.)

Abstract

Vigorously emerging outside mainstream linguistics, the two subdisciplines of Text Linguistics TL and Discourse Analysis DA have many points in common. In addition to sharing identical theoretical constructs, like text/discourse, they have many similar (if not identical) areas of investigation.

The lecture focuses on a few controversial issues which, if solved in one particular way, might place Discourse at least on a par with Sentence as regards centrality within the theory.

The following three types of sources lie at the basis of many of the statements: (a) recent research published in Europe and the United States (See Bibliographical References, for a tip of the iceberg); (b) so far unpublished Conference Proceedings (Birmingham 1974, Milan 1974, Hasselt (Belgium) 1974, Stuttgart 1974); (c) personal conversations with Roman Jakobson on boundary problems in linguistics, the prospects of discourse/text research, the status of poetics etc.

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The Data

SECTION ONE:

(1) (Mary lies in hospital.) (Mary was badly wounded in a car crash yesterday.)
(2) (a) (Mary lies in hospital.) (b1) (It **is** all a great mess.)
(b2) (It **was** all a great mess.)
(3) (a) (Mary said something.) (b1) (John did not understand **her**.)
(b2) (John did not understand **it**.)
(4) (a) (John buried his father yesterday.)
(b1) (Strindberg is a great Swedish writer.)
(b2) (Strindberg was a great Swedish writer.)
(b3) (Strindberg had been a great Swedish writer.)
(b4) (Cervantes had been a great Swedish writer.)
(b5) (He had been a great Swedish writer.)
(5) (George bought a car yesterday.) (The car is very expensive.)
(6) (The car is very expensive.) (George bought a car yesterday.)
(7) (A car is very expensive.) (George bought a car yesterday.)
(8) (Yesterday George bought a car that was very expensive.)
(9) (a) (Mary bought a book last week.)
(b1) (The book is about crocodiles and alligators.)
(b2) (**A** book is about crocodiles and alligators.)
(10) (Mary bought a book last week.)
(b1) (I also bought a book.)
(b2) (I also bought **the** book.)
(11) (John did **not** buy a book yesterday.) (He gave **it** to his sister.)

(12) (a) (Peter **is looking for** a secretary to type his novels.)
(b1) (The secretary seems to be very pretty.)
(b2) (The secretary is very pretty.)

(13) (Peter came in.) (Wendy smiled at Peter.)

(14) (Wendy smiled at Peter.) (Peter came in.)

(15) (Wendy smiled at **Peter** when **he** came in.)
(Wendy smiled at **him** when **Peter** came in.) (**Him** may not refer to **Peter**)

(16) (Peter does not like **coffee**.) (John, however, does not like **him** either.)

(17) (Peter does not like **the Prime Minister**.) (John does not like **it** either.)

(18) (a) (The **statue** in the **park** of that **village** has been damaged by a **tornado**.)
dH1 dH2 dH3 dH4
(b1) (**It** could however easily be restored to its original state.) [dH1]
(b2) (The Council therefore decided to close **it** to the public.) [dH2]
(b3) (It was by great good fortune that **its** houses were saved.) [dH3]
(b4) (In other villages **it** caused much more damage than that.) [dH4]

(19) (He planned to go to **Italy** this summer.) (She also planned to go to **France** this summer.)

(20) (The old woman **was buried** in her native village.) (She **is dying** of a virulent pneumonia.)

(21) (Peter **will** write an article for our review.) (It **was** published in a special issue.)

(22) (Please try to come to Paris.) (I am sure you forgot to do so.)

(23) (Harry has **never** been to Rome.) (He spent his holidays there **last year**.)

(24) (The whole afternoon Peter worked on his new book.) (He lit a cigarette.)

SECTION TWO: Structuring Exchanges between Person A and Person B:

(X.25) (A) (I speak English.)
(B) (So do I.)

(X.26) (A) (Have you spoken to the doctor?)
(B) (Yes, I have.)

(X.27) (A) (Have they delivered the furniture?)
(B) (They have done the desks, but that's all.)

(X.28) (A) (Do you take milk?)
(B) (Thank you, I've had one.)

(X.29) (A) (Those who predicted a dry summer were disappointed.)

(B) (I can't understand this passion for altering our spelling.)

SECTION THREE: Labov & Waletzky (1967): '**Narrative Analysis**: Oral versions of Personal Experience.'

Interview No. 5: **BASIC TEXT**
(Were you ever in a situation where you were in serious danger of being killed?)
Yes.
(What happened?)
I don't really like to talk about it.
(Well, tell me as much about it as you can.)
Well, this person had a little too much to drink, and he attacked me, and the friend came in, and she stopped it.

In **Narrative 5**, there are four independent clauses:

(5)	(a)	(Well, this person had a little too much to drink)	**PARAPHRASE ONE**
	(b)	(and he attacked me)	
	(c)	(and the friend came in)	
	(d)	(and she stopped it.)	
(5′)	(c)	(A friend of mine came in)	**PARAPHRASE TWO**
	(d)	(just in time to stop)	
	(a)	(this person who had a little too much to drink)	
	(b)	(from attacking me.)	
(5 ′′)	(d)	(A friend of mine stopped the attack.)	**PARAPHRASE THREE**
	(c)	(She had just come in.)	
	(b)	(This person was attacking me.)	
	(a)	(He had a little too much to drink.)	

SECTION FOUR: Fillmore (1973) 'May We Come In?'

(1) (Sapir 1921) (The farmer killed the duckling.)

(2) (Katz & Fodor 1963) (The bill is large.)
(3) (Bar-Hillel 1960) (a) (The box is in the pen.)
(b) (The ink is in the pen.)
(4) (Chomsky 1965) (a) (Sincerity may frighten the boy.)
(b) (Howard may frighten the boy.)
(c) (Felicity may frighten the boy.)
(d) (Charity Cooper may frighten the boy.)
(5) (Fillmore 1973) (May we come in?)
(6) (A) (May we come in?)
(B) (Okay.)
(7) (A) (I did a good job.)
(B) (No, you didn't.)
(8) (a) (A) (Did we make a mistake?)
(B) (Yes, we did.)
(b) (A) (Did we make a mistake?)
(B) (Yes, you did.)
(9) (**May** we **understand** your proposal?) **Zero acceptability!**
(10) (**May** we **succeed** on this project?) **Zero acceptability!**
(11) (May we swim in?)
(12) X COME TO Y AT T
(13) I came **there** yesterday morning.
(14) (A) (May we come in?)
(B1) (It's apparent to me, gentlemen, that you are already in.)
(B2) (Don't you mean to say that you want to come out?)
(B3) (Yoohoo, here I am. Go right in.)
(B4) (Why ask me?)
(B5) (Of course; why do you ask?)
(B6) (Okay.)
(B7) (Yes, you may.)
(B8) (Yes, please do!)
(B9) (By all means, come in!)
(15) (Prison WARDEN to PRISONER at cell door) (May we come in?)
(PRISONER from inside cell to Prison WARDEN outside cell) (_________)
(16) (A) (I would like to enter the place where you are, and I am asking you to give me permission to do that.)
(B) (I hereby grant you the permission that you requested.)

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1974. Stuttgart

InterDisciplinary Aspects of Discourse Analysis

(Paper given at the Congress of Applied Linguistics which took place in Stuttgart in the summer of 1974. Proceedings edited by Gerhard Nickel and Albert Raasch)

(Epigraph:) (Roman Jakobson, 1973:)
The relationship between linguistics and the adjacent sciences awaits an intensive examination.

1. This is an explanatory paper. It tries to put across the simple point that the main source of crisis in present-day linguistics is (a) the boundary problem, and (b) the lack of correlation studies. As such it is future-oriented, rather than the opposite.

2. "The problem of interrelation between the sciences of man appears to be centred upon linguistics. [...] Linguistics is recognized both by anthropologists and psychologists as the most progressive and precise among the sciences of man and hence as a methodological model for the remainder of those disciplines."

Contemplating the history of the science of language is a useful and instructive way of peering into the future of this central discipline of the humanities. There are two distinct points worth taking up here: one is the fact that in its history there have been different language units lying in the central area of research preoccupations, and forming what may be termed a **research focus**. With the passing of time, there have been clear shifts in research focus; that such shifts have occurred is, of course, a commonplace, but the fact that they consistently occurred in a certain specified direction is far more relevant and symptomatic.

Grimm's Law and Verner's Law as well as the work of Rasmus Rask illustrate one kind of preoccupations, emerging from phonetics and moving towards morphology. The total inability of diachronic linguistics to adequately cope with syntax is notorious.

Research focus then imperceptively moved from the analysis of phones to the analysis of morphemes, and then to groups of morphemes. It was at about that stage that structuralism began to be remotely looming in the distance. As Taber (1966),

Engler (1967), and Mauro (1972) interpret Saussure (1916), his emphasis was on the phrase; and research focus placed on the phrase roughly characterized the whole movement of surface structuralism, **which** could not provide and adequate description of the Sentence.

Then came the dramatic hint at the "multistructure" approach, and the possibility of hierarchically organized layers of structure on a dimension of depth. It was thus that in 1957 Sentence Linguistics literally came into being.

But after the first wave of enthusiasm was over it was gradually found out that there were many things that sentence linguistics could not do: first, it could in no way cope with inter-sentential relations; secondly, accumulated research tended to show that a 'ceiling effect' had occurred in syntax, which, in the words of John Sinclair (1974), now had to manage the intricacies of intonation selection, information organization, semantic structuring, sociolinguistic sensitivity, illocution and presupposition (including the pragmatic variety), in addition to its whole array of traditional concerns. All these symptoms clearly point to the necessity of an additional level of linguistic description called discourse: less than 20 years after the clear emergence of a multi-structure approach, as embodied by TG grammars, there is need of a multi-sentence angle in the discipline.

3. This consistent and unidirectional (from low to high) shift of research focus has led to the emergence in the last few years of both Text Linguistics and Discourse Analysis. The ultimate urge lying behind these new and similar (if not identical) research tendencies is the acute need to go beyond the somewhat artificial boundaries of the Sentence, hence one boundary problem. There has been considerable resistance to such 'expansionist' tendencies. The frontiers of linguistics were axiomatically laid down in statements like the one made by Katz & Fodor (1963), who declared that 'grammars seek to describe the structure of a sentence in isolation from its possible settings in linguistic discourse (written or verbal) [...] without reference to information about settings and without significant variation from speaker to speaker'. Situational contextualization and sociolinguistic sensitivity are thus emphatically left out. Zellig Harris (1951), too, discussing his brand of discourse analysis, has stated that "exact linguistic analysis does not go beyond the limits of the Sentence." John Lyons (1969:176) echoed similar views by stating that "the Sentence is the largest unit the linguist recognizes". Such clearcut statements, strongly programmatic in character, exclude all possibility of going beyond the Sentence.

4. Such an attitude emphasizes formal aspects: any attempt at going beyond the Sentence must be justified by 'morphemic' evidence. But given the fact clearly acknowledged by many that there is an uneasy relationship between the formal and the pragmatic in linguistic description, one could roughly summarize the formal angle of vision in linguistics as a ***strong view*** animated by the desire to preserve pure the ***autonomy*** of the discipline in the sense given by Antoine Meillet as early as 1928, and strongly emphasized by Chomsky (1957, and subsequently), and Katz & Fodor (1963). By the side of the autonomous approach signalling the strong view, there has for some time been manifest an underlying trend towards ***integration***. Hence, the second boundary problem.

5. Linguists, whether they like it or not, "must become increasingly concerned with the many anthropological, sociological, and psychological problems which invade the field of language," said Edward Sapir in 1929. And it is in fact the balance of power between autonomy and integration that characterizes the development of present-day linguistics. The substantial concessions made to semantics and the wealth of research devoted to Analysis of Function and Analysis of Meaning clearly point to the fact that integrational tendencies are gaining ground, and the uneasy position—hinted at before—between the formal and the pragmatic is now in the process of favouring the latter. Once integration is taken up with all its far-reaching and often unpredictable consequences, when we have accepted two-term hyphenation, such as socio-linguistics, neuro-linguistics, and even para-linguistics, how are we to handle three-term varieties, like neuro-sociolinguistics? All the more so as 'the problem of interrelation between the sciences of man appears to be centred upon linguistics'. Granted that one of the 'in-mates' often evinces domineering tendencies, pregnantly illustrated by various degrees of capitalization, e.g. SOCIO-linguistics, to what extent is the hyphenated field still "linguistics"?

6. With the emergence in 1957 of the generative-transformational approach to language study, it is adequate to say that the scope of linguistics has been expanded in such a way as to include 'vertical' structuring, and notions linked to degree of depth have gained wider and wider circulation. It seems that in the early 1970s yet another expansion, this time coming from the ***applied*** subdisciplines is taking place in the field of the general theory of language: in addition to verticalization, the detection of linguistic structuring over stretches of language wider than the Sentence is being accorded increasing attention. But the expansion of what I prefer to call ***structural span*** entails considerable difficulties. On account of the growing evidence in support

of the rejection of the Sentence as the highest unit of linguistic description, the notion of structural span may become an important linguistic variable. But in the process of dealing with this particularly troublesome variable, there is so far no evidence whatever that the conventional procedures for the investigation of more restricted structural spans, such as the Sentence, may have any validity. To put the idea in the words of Seymour Chatman (1974), 'there is the domain **of** the Sentence, and the domain **beyond** the Sentence; there is no particular reason why the rules of one should duplicate or even resemble those of the other'. Faced, in other words, with Discourse as a structural span rapidly emerging within our research focus to form a distinct topic of investigation, there is no reason so far to believe that what I provisionally entitle ***Discourse Mapping*** can best be handled by the already evolved generative procedures of the conventional brand. Given the considerable complexity of types of information and controlling factors structure in discourse, e.g. linguistic, para-linguistic, non-verbal, pragmatic, silence phenomena etc, it is only via the concerted and co-ordinated efforts of a wide range of disciplines that minimal results can be obtained.

7. So much for the boundary problem. Casting now a cursory glance at the question of correlation studies, or rather the lack of them, we anticipate that Discourse Analysis can be solidly developed and make progress if and only if thorough correlation studies are undertaken, on a genuine basis, between the following branches of science subordinated, superordinated, or simply non-ordinated, to linguistics proper. Given the restrictions of space, the synoptic presentation of a set of targets for correlation studies is the most profitable solution (though perhaps the least convincing. Brackets give sample sets of categories to be submitted to such correlative analysis.

(1) **SYNTAX** (e.g. competence & performance, pronominalization, sentence boundary, the 'ceiling' effect)
(2) PHONOLOGY (e.g. suprasegmentals)
(3) SEMANTICS (e.g. presuppositions, esp. pragmatic presuppositions, factivity, topic & comment, discourse reference, truth value, performatives)
(4) PSYCHOLINGUISTICS (e.g. motivation, intention, psychological reality of structural depth)
(5) SOCIOLINGUISTICS (e.g. role, role structure, role repertoire, repertoire range; turn, turn taking, participant boundary, adjacency pair, [degree of] institutionalization)

(6) THEORY OF LANGUAGE TEACHING (e.g. domain, language for special purposes; transaction, sequence, exchange, act, move)
(7) THEORY OF TRANSLATION (e.g. contrastive analysis of target vs source discourse structure)
(8) POETICS (e.g. context, style, stylistics, 'literaricity', macrostructure, casual vs non-casual utterance)
(9) DISCOURSE ANALYSIS (e.g. cohesion, coherence, congruence, connectedness, appropriateness, phoric reference)
(10) SEMIOTICS (e.g. verbal vs non-verbal in the whole range of discourse, syntactics & pragmatics, encoding processes, sign production)

8. Discourse Analysis and Text Linguistics also require correlation: though they have almost identical areas of investigation, both the theoretical apparatus and the respective methodologies are developing along diverging lines, the primary outcome of which is uncertainty of communication. One of the important points to be taken into account as part of the correlation studies is the question of degree of reliance on either a data-bound approach or an intuition-bound approach to language study.

9. The present paper postulates, rather than demonstrates, that a dynamic interdisciplinary approach to discourse is possible and necessary on the basis of fundamental concepts such as Discourse Mapping, which is a complex socio-psycho-semiotic/linguistic category, not necessarily implying generation. Given the tremendous complexities of spoken discourse, particularly as compared with the apparent straightforwardness of written discourse, though 'writing is only a substitutive system,' as Roman Jakobson (1973 : 29) stresses, it is as yet far too early to say what the actual and specific parameters of discourse mapping are. It has been stated by Chomsky (1964 : 112) that linguistics has to do ultimately with 'theoretical psychology'; in the light of developments in the last ten years in sociolinguistics, semiotics, pragmatics, it is perhaps high time to rephrase the goals of linguistics as having to do with 'theoretical **social** psychology'. And still lingering on the very last lines of Current Issues, it may be more correct to say: it is necessary to go far beyond the over-restricted framework of modern generative linguistics and the narrowly-conceived abstractionism from which it springs.

10. Is there 'a clearcut division between theoretical linguistics and applied linguistics,' as asserted by Janos Petöfi (1973 : 13)? One important conclusion of the present paper is, on the contrary, that there are no clearcut divisions in linguistics. It

is precisely this kind of answer which tips the scales in favour of either autonomy or integration, excluding or including the whole area of applied study.

The second conclusion is the obvious necessity to conduct genuine and thorough correlation studies, which, in its turn, is the direct outcome of an imperceptible switch from an autonomy approach to a more realistic integrational approach: we are at present witnessing this shift as a slow and steady process operating in one direction only.

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1975. Helsinki

Presupposition, Assertion, and Discourse Structure

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1.0 Abstract. It is a matter of common knowledge that discourse units are wired together in a specific way to form run-on texts. 'A sentence might be compared,' Enkvist (1975b) says, 'to a piece of flex with plugs at either end, and these plugs have to connect with corresponding plugs at the end of neighbouring sentences'. The task of the present paper is to point out that in addition to "wired" linkage between hypermorphemes, there is also "wireless" communication [or transmission], obtained via discourse presuppositions—so far not investigated at all in spite of the plethora of work done on the sentential variety. Both the discourse assertions and the discourse presuppositions are here interpreted as hypermorphemes, and represent overt and covert contributions respectively to discourse structure. It is being suggested that the covert structuring of discourse is at least as important as its corresponding overt counterpart precisely as a result of its far-reaching consequences on the actual linearization.

1.1 Linguistic units and structural span. The most outstanding question in any discussion of word order is that of the theoretical frame of reference: word order—within what frame? The answer is being provided by the complex binary opposition between the micro- and the macro- levels as outlined in (1):

MICRO-LEVEL		Below the Sentence:	
	1.1 micro-		Morpheme/Word.
	1.2 mini-		Phrase/Group.
	1.3 macro-		Clause/Sentence.

MINI-LEVEL		The Sentence:	
2.1	micro-		Simplex Sentence.
2.2	mini-		Complex Sentence.
2.3	macro-		Compound Sentence.
MACRO-LEVEL		Above the Sentence:	
3.1	micro-		Hypermorpheme.
3.2	mini-		Partial Sequence.
3.3	macro-		Total Sequence.

The issue of word order has bearing upon the upper ranges of the hierarchy and is the outcome of presentative movement transformations, as described by Hetzron (1975), and triggered by constraints characterizing overall discourse structure. As pointed out by Kiefer (1971), early transformational work was 'inclined to relegate the problem of word order ***in toto*** to performance'. It is within such an approach that constituent ordering was placed within a clear sentence perspective (cf. Danes ed. 1974). Thus, Functional Sentence Perspective takes the SENTENCE as its fundamental structural span, and deals essentially with units placed immediately under it in the hierarchy. FSP has in consequence at least one point in common with early transformational approaches, and tends to concentrate excessively on phenomena of the type—

	(1)	Deutsch spricht man in Österreich.
[ASSERTS:]	(a)	German is spoken in Austria.
	(b)	The language spoken in Austria is German.
[***PRESUPPOSES:]***		Really good German is only spoken in Austria.(*echt* Deutsch...)

We here consider that Topic, Comment, and even Focus are manifestations of the presentative function in the syntactic linearization. The Focus/Presupposition binary opposition of a sentence model is replaced by the Assertion/Presupposition dichotomy within a discourse model, the linearizing operations being taken care of by the Presentative Movement.

1.2 Cue overlap. It has already been pointed out that 'cues from levels other than phonotactics or lexis may play a crucial role' in investigating word order. Furthermore, the author goes on to state—

> [Enkvist 1975a] Many of the forces affecting the word order of a clause or sentence do not reside within that clause or sentence. [...] Some of the parameters affecting word order must be sought outside the affected clause or sentence, in the textual or situational context, in the universe of discourse, in the culture and knowledge shared by the communicants, and in other domains outside the sentence itself.

The Assertion/Presupposition interplay at discourse level is one such domain. A discussion of morpheme sequentialization within a consistent discourse perspective would bring in useful cues for sentential description from the area of the hypermorpheme; such cues are **not** provided by information coming from the language units below sentence level. An investigation of constituent ordering (morpheme vs hypermorpheme) within the structural span of discourse poses quite different theoretical problems. As has already been pointed out by Ruth Kempson (1975 : 123), 'the structure of discourse is not predictable in the way the structure of a sentence is'. One argument in support of positing discourse as a separate level of linguistic investigation is that central categories of conventional linguistics—e.g., Competence/Performance—no longer seem to hold at the level of discourse, where ordinary theoretical constructs, such as ***style*** and ***context***, are modified beyond recognition as a result of pressure coming from the area of pragmatics. After identifying pragmatics with performance, Deirdre Wilson goes on to exclude context altogether from the range of preoccupations of a competence model:

> [Wilson 1975 : 60] ... wherever context plays a part in the interpretation of a sentence it is the job of a pragmatic, rather than a semantic theory to determine the part it plays.

1.3 The semantics of discourse. Mainstream linguistics is definitely against incorporating parameters coming from supra-sentential levels into the standard theory: inter-sentence relations are often dogmatically excluded from a theory of semantics of the standard type:

> [Kempson 1975 : 123] ... inter-sentence relations are excluded by fiat since they constitute part of a theory of discourse, not a theory of semantics. [...] The syntax of a simple sentence cannot be allowed to have a conjoint sentence as part of its underlying structure for two reasons: (i) there is no syntactic evidence to justify such an underlying structure [...] (ii) general conditions on

> recoverability prohibit such an analysis. [...] Similar reasons militate against a semantic rule stating as part of the interpretation of a simple sentence that the preceding sentence has contained in it an indefinite noun phrase. To incorporate either type of rule into the grammar would be to transform the grammar predicting the sentences of some language into a grammar predicting the discourse of some language. [...] Thus any attempt to incorporate such a prediction into the grammar is in principle doomed to failure.

Restricting grammar to sentential description is indeed a sensible suggestion, all the more so as discourse does indeed evince its own specific patterning. One thing is certain: it might perhaps be wise to reconsider the significance of cues coming from areas of investigation situated above the sentence, for 'inter-sentence relations' cannot be 'excluded by fiat from a theory of semantics'. They are already part and parcel of a semantic component of a theory of discourse. And, to be sure, a theory of semantics can never be pitched against an overall theory of discourse.

2.0 Sentential Presuppositions vs Discourse Presuppositions.

2.1 Sentential presuppositions. All discussions of presuppositions in both philosophy and linguistics have deliberately been conducted on decontextualized—but easily contextualizable—language data. By way of illustration, the reader is referred to the set of Russellian "King of France" arguments—so very politically tinged—, which were invariably put forth at a time when the "present King of Spain" had not yet been politically reinstated. The whole discussion originated just before the turn of the century in philosophy and only happened to reach mainstream linguistics three quarters of a century later, after 1968. The issue has now reached a stage of acute crisis, as is excellently pointed out in Wilson (1975) and Kempson (1975). The deadlock seems to be so complete that a drastic suggestion is made—the total eradication of the theoretical construct in question from all semantic theory. This is done with an arsenal of arguments mainly coming from the field of discourse.

2.2 Discourse presuppositions. Presupposition in philosophy goes at least as far back as Heidegger, who, according to Richard Palmer (1969 : 135) pointed to the 'impossibility of presuppositionless understanding'; in fact, Heidegger's 'interpretation is never a presuppositionless grasping of something given in advance'

for the simple reason that 'the most presuppositionless interpreter of a text has preliminary assumptions'. I am therefore inclined to derive two distinct presuppositional traditions in philosophy: (a) one centred around Russell and Frege, which formed the essence of practically all theoretical discussion in the 20th Century, focused on Sentence/Presupposition/Statement, and developing very close ties with both formal logic and truth-conditional semantics; (b) the tradition of discourse presuppositions, derived directly from Heidegger, and reaching linguistics as a result of the systematic investigation of language units larger than the sentence via text linguistics and hermeneutics. It is in fact Heidegger's 'textual presuppositions', reinterpreted in a sociological frame of reference by Rommetveit (1974) that form the basis of the discourse presuppositions, first discussed by Muraki (1972). We thus add to the already exceedingly long list of presupposition typology (cf. Allwood 1975, for conventional, non-conventional, and other presuppositions) by suggesting the dichotomy sentential vs discourse presuppositions. Allwood distinguishes between (a) lexical presuppositions (i.e., connected with lexical items), and (b) thematic presuppositions (i.e., connected with the information structure of the sentence). As part of a similar taxonomic-typologic approach to the same linguistic phenomenon a case is made in support of discourse presuppositions as inter-sentential semantic phenomena sustained through the discourse across sentential and participant boundaries as well as intra-textual boundaries of any other type. Allwood's 'presuppositional irony' is after all best manifested at discourse level and is ultimately a feature of discourse structure and constituent ordering (See **Section 3.4** of this paper).

2.3 Towards a formula for discourse presuppositions. Starting from discourse provisionally defined here as "a non-conjoined chain of sentences", we tentatively define discourse presuppositions as "whatever has to be assumed across conventional sentence boundaries—possibly subsequent to conjoiner-deletion processes—in order for discourse to be completely meaningful". The only researchers so far to deal with discourse presuppositions have been Muraki (1972) and Landesman (1972). There are two fundamental definitional strategies that one could indeed adopt in defining the phenomenon: either (a) select the widest possible and most comprehensive definition, or (b) resort to the narrowest and most restricted possible one. We are going to adopt the former strategy and bracket a substantial amount of implicit meaning under the same heading. As all presuppositions are treated as entailments by Wilson (1975) and at least part of them as implicatures (cf. Gazdar 1975), the premises exist for a provisional methodological decision to bracket several logical constructs under the

same blanket term. The definitional test of discourse presuppositions is not operated in terms of negation (e.g. 'statement which is kept stable under negation'), but rather in terms of discourse heads (cf. Sandulescu 1975) and their possible interrelationships.

In contradistinction to a sentence, a discourse contains (a) assertions, and (b) presuppositions; whereas most of the assertions can be adequately handled at sentential level, most of the presuppositions require a frame of reference wider than the sentence. One main reason is that they form an undercurrent which is never quite capturable at the level of the linear manifestation of the discourse. One common way of defining presuppositions is via a two-term relationship, according to the '**X PRESUPPOSES Y**' formula (cf. Leech 1974 : 291). The 'X PRESUPPOSES Y' way of defining them in its turn presupposes that both X and Y are sentences or phrases (cf. Ducrot 1971 : 191-221). Secondly, there is the assumption that both X and Y are in a paradigmatic, rather than syntagmatic, relationship. But what happens in discourse? A discourse approach to presuppositions foregrounds the syntagmatic axis in the first place, and the issue of co-occurrence becomes more important than any other relationship. It must therefore be emphasized that the X / Y interrelationship may be either (a) paradigmatic, or (b) syntagmatic, or even (c) a complex conflation of both.

3.0 Inter-Sentential Linkage.

3.1 Overt inter-sentential linkage. It is a matter of common knowledge that discourse units are wired together in a specific way to form run-on text. 'A sentence might be compared,' as Enkvist (1975b) says, 'to a piece of flex with plugs at either end, and these plugs have to connect with corresponding plugs at the end of neighbouring sentences.' But this is merely one aspect of the problem: the overt aspect. Such overt connectedness may be achieved, as is known, by the following means: (a) definite noun phrases with the definiteness feature derived from the fact that there was prior mention of that particular noun phrase in the discourse; (b) similarly, extensively recurrent pronouns (as is quite the case in a tightly packed narrative discourse); (c) sustained use of tense throughout the discourse with one occurrence in close correlation to the other, particularly the issue of tense sequentiality and degree of indirection of the discourse; (d) the expression in various ways of the three types of deixis—Time, Place, and Person—in the linear manifestation; (e) conjoinability via conventional conjunctions.

The theoretical model we propose thus assumes the existence of an abstract connector K between sentences. The internal structure of this abstract unit maps out

all features related to discourse connectedness. A systematic investigation of K structuring is of vital importance to the formulation of an explicit theory of discourse. The abstract connector evinces an overt structure covering all connectedness markers emerging in the linear manifestation of the discourse: semantic significance of NP recurrence, sustained tense and time deixis, sustained place deixis, explicit conjoining via (a) conventional, and (b) unconventional conjoiners. All this builds the overt matrix Ko of the abstract connector K, which has both psychological and communicative reality in the complex process of discourse mapping (easily triggering rephrase phenomena in spoken discourse). Given its reality in the communication act, K should in no way be viewed as a mere inventory of random characteristics at meta-level, very much like the chaotic jumble of plugs on the floor of any good recording studio of any modern radio station. (The structure and function of the abstract connector K will be discussed in far greater detail in a forthcoming paper, and its communicative significance will be then placed in the right perspective; cf. Sandulescu 1976).

In addition to "wired" linkage (i.e. of the overt kind) between hypermorphemes, there is also "wireless" communication. By the side of the overt connectedness markers discussed above, there is a complex set of covert connectedness markers, which in their turn build a matrix, quite symmetrical in shape, but not at all similar in content, to the overt matrix Ko. These covert discourse-continuity markers form a separate matrix: the covert matrix Kc of the abstract connector K.

Such abstract matrices of both types necessarily exist in both discourse participants—the sender and the receiver—at inter-sentential boundaries: an adequate description of their structure is an essential part of a theory of discourse. The present discussion does not deal with the structure of the overt matrix Ko, as many of the overt characteristics have already been much discussed (cf. Halliday & Hassan 1976). For purely methodological reasons the overt abstract connector Ko is kept as empty as possible of discourse connectedness, mainly at the level of the linear manifestation of two-hypermorpheme discourse. This particular procedure has been resorted to in a deliberate attempt to delete "wired" linkage, and restrict intercommunication to the "radio'd" variety; in other words, attention will be focused on the covert matrix to the total exclusion of the overt one (as much as this is humanly feasible).

3.2 Covert inter-sentential linkage. In his discussion of sentence grammar dating back to 1957, N. Chomsky starts with one initial symbol—that of S. In consequence,

any conventional sentence-based linguistics takes as its starting point the same initial single symbol. A discourse model, however, even if it is of the simplest possible variety, must necessarily start from the following three initial symbols, evincing a close correlation between them:

(3) Sx Sy Sz

These correlated initial symbols are hierarchically organized. The present discourse model does not begin with syntax, but foregrounds the semantic parameters from the start, assuming that though discourse evinces definite structuring, it does not evince syntactic parameters of the conventional kind, which are commonly handled by any generative-transformational grammar (for a similar view, cf. Ruth Kempson 1975 : 123). Not only do we approach the problem from the semantic angle of vision, rather than the purely formal and syntactic one, but we foreground the most recent and very controversial area of semantics, namely the theory of presuppositions. As was already mentioned, the current presupposition formula is—

(4) X PRESUPPOSES Y

where both X and Y are assimilated to hypermorphemes. As a result we can rewrite the above formula as—

(5) Sx PRESUPPOSES Sy

where sentential hypermorpheme x presupposes sentential hypermorpheme y. In discourse, however, this formula is radically changed in that discourse presuppositions operate on the following far more complicated pattern:

(6) The interrelationship of syntagmatically co-occurring Sx and Sy can only be established on the basis of an underlying Sz, where all symbols—Sx, Sy, and Sz—are to be interpreted as sets.

Thus, a two-hypermorpheme discourse pQ of the type—

(7) pQ → Sx + Sy

would presuppose the existence of **at least one** background sentential assumption or underlying statement belonging to the set Sz; in extreme cases, the set Sz may be open-ended as regards the possible number of underlying statements. In this way, discourse presuppositions carry with them three-term relationships which generally replace or supplement the more primitive and more conventional 'Sx PRESUPPOSES Sy'. Here is an extreme example in point:

(8) "Where is the bicycle? I want to shave this morning!"

This triangular hypermorphemic interaction implies that the first two of the three elements involved are linearized; they are, in other words, part and parcel of the linear manifestation of discourse, whereas the third element, operating as a semantic link between the two, is never part of the same linearization. In terms of more traditional linguistics, if we assume that in syntactics we are always faced with the two axes—one syntagmatic and the other paradigmatic (whichever way Homski may wish to beautify them)—it is Sx and Sy that are always in a relation of overt co-occurrence, with Sx in initial position (functioning as The Precedent), and Sy in 'final' position (functioning as The Subsequent). Sz is in a paradigmatic relation to both Sx and Sy. Such a relation is always and diagrammatically triangular:

(9) Sx— — — —>— — — — — — — —>— — — — — —> Sy
Sz

In a syntagmatic relationship, the dotted arrow indicates the linear direction of discourse, whereas the obvious position of Sz quite outside the linearization here indicates a paradigmatic relation between the surface manifestation and the depth interpretation. For reasons of concision and simplicity, we disregard the assertion aspects of the discourse and concentrate on its presuppositional aspects; we also disregard the possible relations between different Sz's as they clearly emerging in multi-hypermorpheme discourse, and concentrate exclusively on two-hypermorpheme discourse, where there is only one single set of Sz apparent. A correct interpretation of the triangle relation given in (9) emphasizes the passage from a sentence model of description (with a conjoining vulnerability quotient) to a discourse model. Other interesting examples illustrating the triangle relationship are the following:

(10 a) "Where is the soap? I'm hungry!"

(10 b) The writer told the story of his future novel to his audience. She immediately wrote a letter to her brother John.

(10 c) They were asked to work more quickly in order to finish very early. He fell ill all of a sudden and went to bed.

(10 d) It is clear that he made a mistake. The city is far bigger than I thought.

(10 e) They are learning English. He has been playing foot-ball.

To summarize: Sx and Sy co-occur linearly; they both presuppose an underlying assumption. This three-term relation can be rephrased as follows:

(11 a) Sx PRESUPPOSES (part of) Sz
b) Sy PRESUPPOSES (part of) Sz

where all three symbols are assigned fixed positions in the hierarchy. There is furthermore a relation of identity between the two Sz's, and an obvious relation of diversity between Sx and Sy. We repeat that each of the three symbols stands for sets of one or more than one items. This set prerequisite is included into the model in order to permit an easy switch from the investigation of two-hypermorpheme discourse to that of multi-hypermorpheme discourse. The set provision also facilitates reference to the notions of ***research focus*** in relation to ***structural span***. For this very reason, in addition to subscripts of the first degree—Ox, Oy, Oz (Precedent, Subsequent, and non-Emergent)—we propose the use of subscripts of the second degree for descriptive purposes, thus—

(12) Ox1 Ox2 Ox3 Ox4 Ox5 Ox6...

A two-hypermorpheme discourse can in this way be turned into a multi-hypermorpheme discourse by a corresponding expansion of the structural span. The focus is kept fixed on the Sx/Sy interrelationship, which need not be symmetrical. It must be emphatically pointed out that the above-outlined notational system describes an exceedingly complex communicative reality. The question of underlying statements in multi-hypermorpheme discourse is of fundamental significance: there

is open-endedness in two directions—overt vs covert—, one of which is non-emergent in the linearization.

3.3 The ultimate nature of the Sz. There are two fundamental kinds of Sz: (a) one that is kept constant throughout the discourse, and summarizes the ***global constraints*** on discourse, which in their turn are of three fundamental types—syntactic, semantic, and pragmatic; (b) the shifting part of the Sz (in contradistinction to (a), which is the constant part of it), containing discourse features and constraint specifications which do change with the passage from one abstract connector to the other. This dichotomy is ultimately a continuum, on which a further intermediate stage (c) of ***zonal constraints*** establishes a bridge between the clearly permanent features of the discourse, subsumed under (a) above, and those subsumed under (b), which are strictly ***local constraints***. GLOBAL, ZONAL, and strictly LOCAL are essentially methodological cuts on a continuum. This is in agreement with the following:

(13) All global features and constraints remain constant throughout the total sequence tQ.

(14) All zonal features and constraints remain constant throughout the partial sequence pQ.

(15) All local features and constraints characterize solely the structure of one single matrix of the abstract connector K; they are not recurrent in any of the senses in which both global and zonal features are, for the simple reason that as soon as they characterize two abstract connectors instead of one, they become zonal, rather than strictly local, features.

Working towards a discourse model which should incorporate, rather than eliminate, conventional sentence linguistics and which is bound to make connectedness explicit has its advantages: it provides among others, via the overt and covert connectors, a homogeneous treatment of heterogeneous features (cf. Pike 1967 : passim; cf. Weinreich, Labov & Herzog 1968 : 3.21). This means placing the syntactic on a par with the pragmatic; the semantic features are so overwhelmingly important that they are clearly superordinated to the other two components. Devised expressly with a view to incorporating the various features of the communication act, the model can easily cope with the notion of ***Participant Boundary*** (cf. Sandulescu 1975), coming

from the area of micro-sociolinguistics. Finally, the treatment of absolutely all discourse features is a synthesis at another linguistic level—that of discourse—of the two or several tree-diagrams of the kind we got so accustomed to in the wild, wild forest of gradually diverging generative approaches: it is simply an attempt to co-ordinate the structural information carried by the tree-diagram.

3.4 Prolegomena to semantic distance. Actual Sz structuring is determined among others by the semantic distance existing between co-occurring Sx and Sy:
(16) If the semantic distance between Sx and Sy is exceedingly great, then the set Sz is substantially overloaded.

(17) It is excessive overloading of the covert matrix of the abstract connector K that actually leads to the rejection of co-occurrence potentialities between Sx and Sy.

There are basically two kinds of illustration material of this phenomenon in two-hypermorpheme discourse: (a) there is one kind of language data involving connectedness across participant boundaries; (b) there is another kind of material—the so-called run-on text, to resort to a looser terminology. The abstract connector is structured differently in the two cases in that it is "world-homogeneous" in one case, and "world-heterogeneous" in the other (world is here used in the Hintikka 1969 sense of "possible worlds", and not far at all from "universe of discourse" which is also gaining increased currency...). The present approach to discourse connectedness thus attempts to avoid the uneasy relation so far existing between the semantic, pragmatic, and syntactic components of the model. There are two fundamental problems related to semantic distance between the hypermorphemes; these problems are somewhat similar to the issue of semantic distance between (content) morphemes: (a) one is the adequate theoretical explanation of the phenomenon, which, via discourse-head interrelationship, also covers the whole theory of figures in poetics, e.g.

(18) She dropped a tear and her handkerchief.

(b) the other one is the actual measurement of such distance. Measurement operations are, however, too heavily dependent for the time being on (i) pragmatic factors, (ii) overall discourse structure, and (iii) discourse typology. This particular point can easily be illustrated with data related to morpheme sequentialization:

(19) //DISCOURSE// (she dropped a tear.) (she dropped her handkerchief.)

(20) //SENTENCE// (She dropped a tear and her handkerchief.)

It is interesting to note that the operation of presentative movement transformations on such sentences directly affects the issue of semantic distance, as a matter of course considerably increasing it:

(21) It is a tear that she dropped, and her handkerchief.
(22) A tear she dropped, and her handkerchief.
(23) Her handkerchief she dropped, and a tear.
(24) Her handkerchief and a tear she dropped.

Measuring semantic distance means in other words measuring such distance between discourse heads at sentence level, and then analysing in a preliminary stage the effects produced by the presentative sequentialization of morphemes; in a subsequent stage, the procedure is analogical, but not qualitatively different, at discourse level, where the question is the degree of match and mismatch between hypermorphemes similarly linearized. It is only on the basis of the premises provided by semantic distance in discourse structure that we can begin to discuss the implications for the overall patterning of text derived from surface object, often called ***comment***, and surface subject, often called ***topic***.

4.0 Ultimate nature of Wilson's and Kempson's demonstration data.

4.1 Discourse in disguise. Most of Wilson's examples can be turned into discourse on the basis of a very few simple processual rules of disjoining. As soon as the sentential demonstration data is turned into discourse, strong evidence is obtained in support of discourse presuppositions. It is worth remembering that discourse can and does indeed accommodate contradictory presuppositions in its structure, whereas the sentence does not. A case in support of discourse presuppositions concurrently maintains the validity of both argument and demonstration data against sentential presuppositions. Wilson's discussion of contradictory presuppositions at sentence

level indicates how necessary it is to pay due attention to the Conjoiner Deletability Principle (cf. Sandulescu 1975).

(25) (Wilson 1975 : 51) //SENTENCE// No-one has ever claimed that Hiawatha was a communist: the claim that Hiawatha was a communist, then, has not destroyed Bill's faith in Longfellow.

(26) //DISCOURSE// No-one has ever claimed that Hiawatha was a communist. The claim that Hiawatha was a communist, then, has not destroyed Bill's faith in Longfellow.

(27) (Wilson 1975 : 49) //SENTENCE// Bill Bloggs might be here—I don't know whether such a person exists.

(28) //DISCOURSE// Bill Bloggs might be here. # I don't know whether such a person exists.

(29) (Wilson 1975 : 73) // SENTENCE // If your teacher was a bachelor you were lucky, but if your teacher was a spinster you were unlucky.

(30) //DISCOURSE// If your teacher was a bachelor you were lucky. # If your teacher was a spinster you were unlucky.

In (30) for instance, discourse formation involves the following distinct operations, provisionally called "processual rules of disjoining": (a) but deletion; (b) period insertion; (c) initial capitalization. The processual rules turning compound and even complex sentences into discourse are either paraphrase rules, or graphematic rules. Very simple paraphrase rules are provided through the operation of the Conjoiner Deletability Principle, leading to the deletion of most co-ordinating conjunctions, and some of the subordinating ones. Subordinate-conjunction deletion must be accompanied by corresponding paraphrase in order to maintain intact the overall semantic interpretation of the discourse. Thus in a sentence like—

(31) (Wilson 1975: 77) //SENTENCE// Either Joanie accused her husband of reading her letters or she accused him of not reading them.

the discontinuous conjoiner ***either... or...*** can be rewritten as an adverbial conjoiner, such as ***alternatively***. In fact, sentence (31) passes through the following stages:

(32) Either X accused Y of doing Z, or X accused Y of not doing Z.

This, in turn, can be rewritten as—

(33) Either (Sx) or (Sy), where (Sx (X accused Y of doing Z)) (Sy (X accused Y of not doing Z))

Then, (33) can be rewritten as discourse through the operation of a paraphrase rule of reinsertion of the non-conventional conjoiner into the linear manifestation of the discourse in order to preserve the initial semantic interpretation intact:

(34) (D (Sx (X accused Y of doing Z)) (K (alternatively)) (Sy (X accused Y of not doing Z)))

where ***alternatively*** is an adverbial replacement for the initial discontinuous conjunction. Both assertive and presuppositional structuring stay unchanged in the sentence-to-discourse transition. Thus, according to Wilson (1975 : 77), sentence (31)—

(35) //**ASSERTS**// Either Joannie indicated that her husband read her letters or she indicated that he did not read them.

(36) //**PRESUPPOSES**// (a) Joanie judged that reading her letters was bad. (b) Joannie judged that reading her letters was not bad.

All this makes us reshuffle (31) in the shape of the following two-hypermorpheme discourse:

(37) //**DISCOURSE**// Joanie accused her husband of reading her letters. Alternatively, she accused him of not reading them.

Such two-hypermorpheme discourse, in addition to preserving semantic appropriateness in point of conjoining, keeps unchanged the corresponding set of contradictory presuppositions. Besides disjoining, the only change that we suggest here is that the sentential presuppositions are to be interpreted as discourse

presuppositions, primarily by virtue of the fact that the language segment under research focus has undergone discourse formation. There are other, more complex, instances of discourse formation among the wealth of examples put forth by Wilson in her attempt to delete Presupposition from a semantic theory of sentence linguistics:

(38) (Wilson 1975 : 75) //**SENTENCE**// If Sartre knows that Chomsky is alive, I'll be surprised, but if he knows that Chomsky is dead, I'll be amazed.
//**PRESUPPOSES**// (a) Chomsky is alive. (b) Chomsky is dead.

(39) (Wilson 1975 : 134) //**SENTENCE**// If John had left I would have seen him go; but I did see him go, so he did leave.

(40) (Wilson 1975 : 134) //**SENTENCE**// IBM has admitted that their computers often turn into frogs, so their computers obviously turn into frogs.

4.2 Defining discourse presuppositions in relation to testability conditions. The present, very brief discussion has selected the problem of presupposition and has related it to sentence structure and to corresponding discourse in order to bring out in bold relief the flimsy nature of the boundary. In consequence, basing very strictly a discussion of word order on such a boundary may have its dangers.

In order to emphasize the overwhelming significance of the underlying stream of implicit meaning in any discussion of linearization aspects as well as constituent ordering, we propose to define discourse presuppositions in the following way:

(41) A **discourse presupposition** is any background assumption which enters into the structure of the abstract connector K—necessarily underlying discourse connectedness—and thereby establishing semantic links between hypermorphemes within the discourse. Testability in discourse lies in the mismatch between emergent and non-emergent hypermorphemes, measured in terms of semantic distance. Some such presuppositions are discourse-internal, others (e.g. the existentials) are most often discourse-external.

5.0 Conclusions

5.1 Discourse semantics cannot do without presuppositions, though it may be conceivable that sentence semantics could do without them, as is suggested by Wilson

(1975) and Kempson (1975). Presupposition thus becomes one of the most fundamental theoretical constructs of an emerging theory of discourse.

5.2 Discourse normally accommodates contradictory presuppositions between linearized hypermorphemes (e.g. the "to be or not to be" literary tradition...), though it operates at assertion level...

5.3 If sentential boundaries are relative, and so heavily dependent on alternative paraphrase, the actual frame of reference in which we speak of constituent ordering must still be an open theoretical question. Parameters vary extensively if we switch from grammatical structure to discourse structure.

5.4 Postulating the existence of an abstract connector K is the only way of providing an explicit description of connectedness in discourse.

5.5 The abstract connector K evinces an overt matrix Ko, structuring emergent information across sentential boundaries.

5.6 The abstract connector K evinces a covert matrix Kc, structuring non-emergent information across sentential boundaries.

5.7 The abstract connector K and the linearized hypermorphemes Sx and Sy are likely to be the fundamental units of discourse.

5.8 Discourse mapping, as a complex process endowed with both psychological and communicative reality, deals both with what is emergent—e.g. linearized constituent ordering—and with what is non-emergent—the discourse presuppositions—as well as with the complex interplay between the two.

5.9 The issue of semantic distance between both discourse heads (as constituent morphemes) and hypermorphemes, and the investigation of the empirical possibilities of measuring it form the most likely area of fruitful research for the future.

5.10 The presentative function, as discussed by Hetzron (1975), places the whole issue of constituent ordering in a new light. The balance between assertion and presupposition and the presentative movement ultimately determine the linearized structure of discourse and represent the real triggers of constituent ordering.

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Displacement Constraints on Discourse

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1.0 Abstract. The paper attempts to provide a tentative answer to the question: To what extent is a text with sentences (or rather, clauses-as-sentences) in another order the same text (i.e. evinces an identical semantic interpretation)? To begin with, points of similarity and disparity are established between sentential and textual paraphrasing. Preliminary data tends to show that the category of Displacement is closely associated with paraphrase via "alternative surface realizations in discourse". Juncture typology in discourse is to all likelihood one fundamental criterion for handling all typologies situated at a level above and beyond the sentence. Temporal Juncture, Participant Boundary, Discourse Head, Degree of Pairability, Degree of Clausal Restriction along a clausal dimension etc—all prove to be essential constructs in obtaining a clear picture of what the semantic interpretation of a text/discourse might look like.

1.1 It is being assumed from the outset of the present discussion that the following **theoretical issues** are not only being given favourable consideration by current linguistic science, but also that they have received—or are in the process of receiving—a positive solution within mainstream linguistics on the basis of a **consistent** and **integrated** theoretical treatment of both spoken and written data:

(a) the scientific status of discourse in language studies;
(b) the description of discourse structure and typology;
(c) the complex issue of a typology of constraints on discourse.

1.2 It is further assumed that the direction in which the above questions are being given a solution is somehow summarized by the following cursory remarks:

(a) a discourse is considered to be a non-conjoined multi-sentence (cf. John Carroll 1972); the minimal language segment within which it is theoretically profitable to speak of "discourse" is the two-sentence sequence;

(b) the sentence—or more accurately, the clause-as-sentence—is, in contradistinction to the approach adopted by conventional linguistics, considered to be the minimal unit of investigation;

(c) multi-sentence research is implicitly put on a par with sentence research as regards theoretical acceptability: it is a fallacy to consider the sentence as the highest linguistic unit (cf. Sections 2.1 and 2.2). One of the central topics of the present study is the relation between Clause, Sentence, and Multi-Sentence (or Discourse).

1.3 Some of the major theoretical premises on which the present research is based are derived from the following sources: I am indebted to Roman Jakobson (1973) for a discussion of the scope of linguistics in relation to other branches of science, to Charles Fillmore (1973) and Ray Jackendoff (1972 : chapter 6) for hints as to the status of discourse within the frame of reference of linguistics as a whole, and finally, to Ragnar Rommetveit (1974) for renewed interest in the Communication Act with due attention paid to sociolinguistics and cultural information.

1.4 Given the ambiguous theoretical status of discourse in relation to text, the **methodological procedures** resorted to as part of the present research spring from the conviction that a data-oriented approach of the kind adopted by, say, Labov & Waletzky (1967) proves in the long run to lead to more profitable strategies as regards the consistent interpretation of both type- and token- data. The reason why an exclusively model-centred approach to discourse of the kind adopted by, say, J. Petöfi (1973) is judged as less adequate is simply its inability to cope with reliable token-data on discourse at the present time. It is here considered premature, in other words, to overgeneralize on insufficient data.

1.5 Our purpose in the present study is twofold: first, to outline a way in which textual principles, viz., the fundamental principles structuring discourse as a distinct and specific level of linguistic inquiry can begin to be understood, as incorporated into an integrated theory of linguistic description, and moderately formalized. By an integrated theory we clearly mean a theory which pays adequate attention to **all** COMMUNICATIVE aspects of language in its use. Renewed interest in such

aspects has in recent years taken the shape of research into pragmatics, semiotics, not only of the restricted kind provided by the Prague School (cf. Danes 1974), and by the London School (cf. Halliday 1973), but also of the more comprehensive type provided by H.P. Grice (1975). Secondly, our purpose is to show that there are constraints on discourse, quite distinct from those of grammar, that are ultimately derived from specific patterning and semantic linkage, as embodied in sets of abstract connectors. The nature of such inter-sentential connectors has so far been very little investigated and is still, from the purely theoretical point of view very unclear indeed. There may be rules as well as constraints at the level of discourse which are really "level-specific".

Furthermore, initial investigation of displacement constraints will hopefully throw some light on (a) textual competence, and (b) text typology.

> (Van Dijk 1972a : 3) If **native speakers have the ability to distinguish between (linguistically) coherent and less coherent discourses,** their competence should contain a device for distinguishing between grammatical and less grammatical texts. In that case, a grammar will have to formulate rules for the derivational description of textual structures. Only then may it serve as an adequate formal model for a postulated, idealized psychical system of linguistic knowledge like competence. **Our competence is** not sentential but **textual.**

Hypothetically, we might really begin at the beginning and suppose, for instance,—within the stream of linguistic convention—that there exists the following typology (partly overlapping) of competence:

(a) linguistic competence (cf. Chomsky 1965 : 4ff)
(b) communicative competence (cf. Hymes 1972 : 269ff)
(c) textual competence (cf. Van Dijk 1972 : 3ff)

Let us further suppose—against convention this time—that linguistic competence is subsumed to (and part of) communicative competence, and that textual competence is subsumed to (and thus part of) linguistic competence. Postulating finally that communicative competence—the most comprehensive of all—covers the whole range of semiotic systems accessible to man, we obtain the following hierarchy:

{A Level} Communicative Competence **Incorporates:**
{B Level} Linguistic Competence **Incorporates:**

{C Level} Textual Competence.

Chomsky's "linguistic" competence is here defined as that part of linguistic competence proper which excludes and discards (for mere methodological purposes) both the A Level, and more important, the C Level too.

1.6 The study of displacement constraints is seemingly profitable only in the case of text characterized by the feature [- PARTICIPANT BOUNDARY]. Given the strict sequential rules (cf. Labov 1970, and Mohan 1974), and the conversational postulates (cf. Gordon & Lakoff 1971) specific to discourse evincing [+ Participant Boundary], the analysis of potential ranges of displacement is full of difficulties, and somewhat redundant in the latter case.

1.7 It is a commonplace to say (cf. Halliday 1973 : 107) that text can be spoken or written, long or short. But as regards text **length** it should be borne in mind from the start that the present study has concentrated on short texts only—operationally defined—, i.e. on what we call partial sequence **pQ**, which are taken, for the sake of oversimplification, to stand for total sequences **tQ**. This assumption should be understood to be semiotically similar to Labov's (1967 : 12) own assumption that the narrative structure of oral versions of personal experience may in the long run prove to be more relevant to the overall analysis of discourse than the minute investigation of, say, Icelandic sagas.

2.0 Fallacies of convention.

Conventional linguistics has for a number of years been subjected to two fallacies of judgment here labelled (a) the "anonymous" letter fallacy, and (b) the "sententialization" fallacy, which are best expressed and summarized by Katz & Fodor (1963/1964 : 479-518).

2.1 The "anonymous" letter fallacy. This issue is closely related to the whole discussion about context as summarized by Enkvist (1974b), but I here wish to connect the question of context with a wider issue (basically handled by the philosophy of linguistics), namely that of the meta-boundaries imposed upon the material under scrutiny, or, in other words, the issue of structural spans. The essence of the controversy boils down to the complex relationship between (a) the status of the sentence, and (b) what we propose to call here "contextualizability". "Sentences can be analysed outside contexts" and "Sentences cannot be analysed outside contexts"

are, according to all principles of logic, two mutually exclusive propositions. But it is the paradox of a branch of humanistic science that both these propositions are almost equally valid. To start the modern discussion, here is what Katz & Fodor had to say, very much in line with what was said before them:

> (Katz & Fodor 1963/1964 : 484) ... let us consider a communication situation so constructed that no information about setting can contribute to a speaker's understanding of a sentence encountered in that situation. [...] The type of communication we shall consider is the following: a number of English speakers receive an anonymous letter containing the English sentence S. We are interested in the difference between this type of situation and one in which the same anonymous letter is received by persons who do not speak English, but are equipped with a completely adequate grammar of English. [...] Suppose S is the sentence "The bill is large". [...]

It has been found out of late, however, that "anonymous letter" procedures could only tell things about a very small area of language studies, and in addition, that such statements were only valid for a very restricted type of sentences, i.e. sentences with a very high quotient of "decontextualizability" (for a discussion of the "ideology" load of the selection of demonstration data, cf. Fillmore 1973 : passim). This issue has quite a lot to do with the issue of sentence typology which need not concern us here. But it is worth noting that such sentences as the ones below, selected for ample discussion by the researchers named next to them, fully enjoy the following important characteristic: they all evince very wide displacement ranges when inserted into a given discourse.

(1)	The farmer killed the duckling.	(Sapir. 1921 : 86-98)
(2)	The bill is large.	(Katz & Fodor. 1963 : 174ff)
(3)	The box is in the pen.	(Bar-Hillel. 1960 : 158-63)
(4)	Sincerity may frighten the boy.	(Chomsky. 1965 : 63-111)

2.2 The "sententialization" fallacy. It has been stated that text linguistics is a non-problem in linguistics by virtue of the fact that all sentences can be conjoined by means of connectives:

> Katz & Fodor!(1963/1964: 490) [...] discourse can be treated as a single sentence in isolation by regarding sentence boundaries as sentential connectives. As a

> matter of fact, **this is the natural treatment** (sic!). In the great majority of cases, **the sentence break in discourse is simply and-conjunction**. (In others, it is but, for, or, and so on.) Hence, for every discourse, there is a single sentence which consists of the sequence of n-sentences that comprises the discourse connected by the appropriate sentential connectives and which exhibits the same semantic relations exhibited in the discourse.

According to the above quoted view, **DISCOURSE IS PARAPHRASED INTO SENTENCE BY POTENTIAL AND-INSERTION**, by virtue of what we prefer to call here **The Conjoiner Insertability Principle**. But instead of starting from the meta-assumption that all sentences are morphemically connected by means of a hypothetical and potential conjoiner, one may equally well start from the premise that sentences, at least most of them, are morphemically disconnected, i.e. that (co-ordinating) **conjunction insertion is a fairly superficial phenomenon**; one might suppose in exchange that sentences are only associated by means of an abstract connector which has its proper place within the overall semantic interpretation of the discourse. In certain instances, this abstract connector is actualised in the shape of a conjoiner, which is always and invariably only a partial expression, never a complete coverage, of the semantic range of the abstract connector. But it must be strongly emphasized that in most cases the abstract connector is not actualised in any way, its one and only materialization being the sentence boundary. Furthermore, inappropriate actualisation of abstract connectors may often lead to inappropriate surface structure of discourse.

The Katz & Fodor solution is clearly unsatisfactory. It is therefore advanced here that conjunction deletion, or in other words, conjoiner deletability may, within the theoretical model, function as a valid principle in the analysis of discourse—**The Conjoiner Deletability Principle**—, in much the same way in which Katz & Fodor's proposed potential conjunction insertion is meant to turn discourse into sentence. This latter principle is, on the contrary, meant to turn sentence into discourse. Thus, the strategy we are proposing in the investigation of discourse is the exact converse of the proposal made by the two semanticists in 1963: namely, we propose potential conjoiner deletion not only as a means of turning sentence into discourse, but also as a means of keeping discourse as discourse. All this is closely related to the fundamental postulation of the nature of the structural span in linguistic description: assuming that discourse is the structural span that linguistics is ultimately concerned with, we are ascribing discourse status to language units in much the same way in which Katz & Fodor ascribed sentence status to discourse units in 1963. Any discourse

remains more acceptable and appropriate, particularly on sociolinguistic grounds, after a process of actual conjunction deletion than it remains after a hypothetical and cumbersome process of ***and***-insertion, to say nothing of the fact that the latter process cannot cross participant boundaries, as will be more clearly seen in the next section.

2.3 On the notion of Participant Boundary. In two distinct footnotes (sic!), Katz & Fodor dismiss (a) the study of discourse, and (b) the study of everyday conversation and dialogue as being irrelevant to theoretical linguistics, or, at least, lying clearly outside the central area of "mainstream" linguistics. Their first dismissive footnote provides linguistic evidence in support of the statement **"discourse can be treated as a single sentence in isolation by regarding sentence boundaries as sentence connectives"**; appended to this statement we find the following footnote:

> (Katz & Fodor 1963/1964 : 490) To illustrate this, let us consider the two-sentence discourse: "I shot the man with a gun," "If the man had had a gun too, he would have shot me first." The first sentence of this discourse is ambiguous in isolation, but not in this setting. But the problem of explaining this disambiguation is the same as the problem of explaining why the single sentence "I shot the man with a gun, but if the man had had a gun too he would have shot me first," does not have an ambiguous first clause. Likewise, consider the discourse, "I heard the noise," "The noise was completely inaudible" and its single sentence equivalent "I heard the noise, and the noise was completely inaudible". In showing why the single sentence is anomalous, a theory of semantic interpretation exhibits precisely those semantic relations in which the anomaly of discourse resides. **This technique of replacing discourses or stretches in discourses with single compound sentences, by using sentential connectives in place of sentence boundaries, clearly has a very extensive application in reducing problems** of setting selection to problems of semantic interpretation of sentences in isolation.

In addition to the fact which comes out quite clearly in the last lines of the quotation that the Conjoiner Insertability Principle is a mere ***tactical*** move deliberately resorted to in order to do away with language data that cannot possibly be accommodated by the theoretical model, it is also worth emphasizing that this kind of argumentation cannot handle the sociolinguistic category of Participant Boundary, e.g. in dialogue:

Speaker A: I shot the man with a gun.
Speaker B: Just because he had no gun himself!
Speaker A: I heard the noise!
Speaker B: But how could you? The noise was inaudible!

This important linguistic phenomenon which is at present in the very focus of research attention (cf. conversational implicatures etc) was totally dismissed in the very next footnote (sic!), which reads:

> (Katz & Fodor 1963/1964 : 490) Sometimes a discourse cannot be directly converted into a compound sentence in this way. For example, The discourse "How are you feeling today?" "I am fine, thanks" does not convert to "*How are you feeling today and I'm fine thanks" **because the compound sentence is ungrammatical. But the fact that sentences of different types cannot be run together in the obvious way may not pose a serious problem** because it is not at all clear that [...]

The argument that such sentences "cannot be run together" because "they are of different types" is totally unfounded not only because the issue of sentence typology is left unclarified, but also because not even "I am fine" and "thanks" could be run together as "I am fine and thanks", though they ultimately belong to the same type of utterance, with "thanks" standing as a sentence equivalent, the semantic interpretation of which is "I thank you" (which indeed becomes a sentence of exactly the same type as "I am fine").

In a word, Katz & Fodor are aware that their Conjoiner Insertability Principle is completely blocked by the occurrence of what we have called here Participant Boundary. This brief discussion proves at least that Participant Boundary is an important linguistic phenomenon which is worth a lot of attention, precisely because it is worth "dismissing". It is indeed an extremely troublesome factor in text analysis: Enkvist (1973b : 131) dismisses it too in the process of macrosyntagm selection as part of his experiment in theme dynamics (as dialogue seems to evince **idiosyncratic discourse-head progression**). Cassirer (1972 : passim) in his analysis of Hjalmar Söderberg's "Pälsen" has to cope with the even more complex issue of Participant Boundary detaching segments of "interior monologue" from the overall structure of the text, and his disregard of the different "possible worlds" thus generated seems, in our opinion, to lead, partially at least, to slightly erroneous conclusions as regards both hierarchy of motifs and motif priority. The very fact that dialogue segments are

deliberately avoided by researchers in the process of sample selection is an ideology-loaded attitude in handling the data.

3.0 Displacement in two-sentence discourse. The device I have chosen for illustrating the nature of the research task is that of examining, as thoroughly as I can, a few short texts. This paper is my contribution, in other words, to the recent, but respectable, tradition in Scandinavia regarding the linguistic analysis of relatively short texts, and remarkably illustrated by Cassirer (1972), Enkvist (1973; 1974), and Sigurd (1974) (the last one dealing with Buffalo Bill...). I consider all these pieces of research as instances of linguistic principles applied to close and minute textual analysis, and hence as true instances of **applied linguistics**. In addition, this latter, and "practical & applied" part of the present paper takes up and expands implicit points in a similar tradition made by researchers in the English-speaking countries, particularly by Labov & Waletzky (1967), Fillmore (1973), Halliday (1973), and Hymes (1973).

For ease of identification, discourse heads will in the following data be transcribed in **block capitals**; then, **the conventional asterisk** [*] is here meant to cover the whole area of grammaticality, well-formedness, acceptability, and appropriateness... rather than be restricted, as is usually the case in sentence linguistics, to the first one or two of these categories.

3.1 Bidirectional displacement. The interdependency between the various types of competence (discussed in Section 1.5) can best be illustrated on the basis of very simple data: ball is a lexical item become famous as part of the 1963 discussion of word ambiguity, but word semantics happens to affect discourse in a remarkable way. Enkvist (1974b : 35) in his discussion of Katz & Fodor (1963/1964 : 486ff) gives among others the following two instances of two-sentence discourse:

(5) ((a) (an object rolled in) (b) (it was a colourful ball))
(6) ((a) (we danced all night) (b) (it was a colourful ball))

As the present approach assumes the clause-as-sentence to be the minimal unit of investigation within the frame of reference of Discourse Analysis (and the sentence/clause controversy renders the terms somewhat impractical), we are going to use **unit** in the subsequent discussion in order to replace the rather awkward clause-as-sentence.

By displacement in two-sentence discourse, we simply mean unit reversal according to the rule ab → ba; the issue is, of course, much more complicated in multi-sentence discourse. Applying this rule to (5) and (6), we obtain:

(7) * (b) (it was a colourful ball) (a) (an object rolled in)
(8) (b) (it was a colourful ball) (a) (we danced all night)

Thus, unit reversal ab → ba, as a particular case of displacement is possible in (8), but not in (7), and the reason lies not only in the intrinsic semantics of the initial lexical items—**it**, **it**, **an**, **we**—as we might be tempted to believe, but also in a complex set of abstract assumptions derived from the semantic interpretation of each of these four sentences as well as from the linkage between them. We propose to call this linkage **The Abstract Connector**: we suggest that it is the task of an abstract connector to make explicit the complex relationship linking **ball** to **danced** in (6) and (8) at the level of the semantic interpretation, and the at least different kind of relationship (perhaps much simpler), providing a far laxer linkage between **ball** and **object** in (5) and (7). The potential assumptions—we could even call them discourse presuppositions—derived from the degree of collocability of the two lexical items are further reinforced by the occurrence in (6) and (8) of the supporting lexical items **all night**. This kind of extra support in presuppositional patterning is missing in (5) and (7). Furthermore, it is of great interest to note that the abstract connector in (8) may be actualised graphematically as in (9), where the colon provides additional spectralization of its essence:

(9) ((b) It was a colourful ball) (a) (:) (we danced all night))

Bidirectional displacement ab ←→ ba is possible in (9), with punctuation preserved intact; there are **sequential constraints** imposed on the linear manifestation of the micro-text by the abstract connector and the semantic interpretation. (9) is simply an instance of two-sentence discourse characterized by complete unit reversibility, in contradistinction to the situation existing in (5). This difference between the two discourses is derived from the different nature of the abstract connector. But in (9) the greater degree of fusion is also signalled graphematically by the lower-case letter in the initial grapheme of the (a) unit; thus, colon insertion and capital letter replacement are graphematic processes closely linked with the displacement operation. Unit reversal is blocked in (5) by the explicit interplay

between definiteness/indefiniteness in the linear manifestation as well as by corresponding pronominalization processes.

By way of summary, one could say that displacement in two-sentence discourse is the simplest type of displacement, for the very reason that it operates with a minimal number of units at the level of the minimal unit of discourse. It concurrently provides the simplest instance of textual paraphrasing in the cases in which inter-sentential relationships are being investigated.

3.2 Juncture typology in deviant discourse. The difficult and intricate question of the features of pathological discourse has been investigated by many authors, from among whom we mention the discussions of aphasia by Roman Jakobson in 1940, 1956, and 1966. Very recently, Ragnar Rommetveit (1974 : 53ff) reopens the discussion of pathological discourse with an extensive analysis of **the homonym symptom** within a clearly micro-sociolinguistic frame of reference. Let us have a look at the following typical discourse utterable by a patient evincing the homonym symptom:

(10) I too was invited, I went to the ball... and it rolled and rolled away.

There are three types of **juncture** in this text: we could best examine them if we take them one by one:

(11) (a) (I was invited) (b) (I went to the ball) (c) (it rolled away) (it rolled away)

The simplest displacement test will show that this is a temporal juncture in the Labov et al. (1967) sense:

(12) ((I went to the ball) (and) (I was invited))

It can in consequence be said that this first segment fulfils the minimal conditions of a narrative sequence by evincing at least one temporal juncture. Secondly, there is another type of juncture:

(13) The ball rolled and rolled away.

Comparing this with other data of the dame type, e.g.—

(14) He laughed and laughed.
(15) Mary looked and looked.

it becomes quite clear that there is no temporal sequence in such examples, even if they are being rewritten in various other ways by means of insertion and/or deletion processes (viz. transformations):

(16) He laughed and he laughed.
(17) He laughed. He laughed.

They are clear instances of repetition (cf. Bellert 1970), not sequentially organized in any way. Thirdly, it is this last type of juncture between **ball** with the semantic reading 'dancing party' and **rolled** that clearly violates the connectedness constraints imposed on normal discourse and thus gives the discourse its deviant (or pathological) features. It is interesting to see that of the two types of constraints discussed in the present study—i.e. temporal constraints imposed on the partial sequence vs discourse-head constraints imposed on the same partial sequence—, the aphasic (at least in this particular type of aphasic discourse) will as a rule observe the temporal constraints imposed on the discourse head by event sequentiality, but will violate the constraints characterizing connectedness between discourse heads at the level of the DH juncture. We can thus say that aphasic discourse of the type discussed by Rommetveit (1974:53ff) is characterized by constraint violation leading to disconnectedness between (nominal) discourse heads: it is a violation of the constraints operating at the level of the DH juncture, with normal connectedness seemingly preserved at the level of the temporal juncture. However, such a suggestion, based on a handful of data only, needs confirmation and possible correction as a result of scanning extensive stretches of aphasic discourse (with special attention paid not only to the homonym symptom, but also to other pathologic speech phenomena as well). A diagrammatic summary of the three-way division of juncture discussed above would look as follows:

TYPE ONE: Temporal Juncture:

(18)(pQ1) ((a) (I was invited to the ball) (b) (I went to the ball))

TYPE TWO: Repetitive Juncture:

(19)(pQ2) ((a) (the ball rolled) (b) (the ball rolled))

TYPE THREE: **Aphasic DH Juncture**:

(20) (pQ3) ((a) (I went to the ball **i)** (b) (the ball **j** rolled))

The partial Sequence pQ1 specifically characterizes narrative discourse; the partial sequence pQ3 provides, on the other hand, an excellent linguistic illustration of the homonym symptom. It is worth pointing out, however, by way of digression, that the study of two-sentence discourse to the complete neglect of a far wider structural span is fraught with danger. Thus (20) is ambiguous, but it might be possible to conceive of foregoing discourse, semi-science-fiction football playing perhaps, in which ball**i** in (20a) would have an identical semantic reading with ball**j** in (20b), e.g.

(21) (a - 1) (I saw that the Ruritanian footballers had forgotten the ball right in the middle of the playing-ground) (a) I went to the ball (to pick it up)) (b) the ball rolled away (as if pushed by an invisible hand)))

This functions therefore as a strong warning that the investigation of two-sentence discourse is as incomplete and almost as artificial as the study of sentences in isolation, so arduously propounded by conventional sentence linguistics.

Type Three Juncture, illustrated under (10) and (20), i.e. the "aphasic" juncture, is in point of actual fact a non-juncture, an idiosyncratic juncture, or at the most a juncture evincing a violation of elementary connectedness constraints. (It must be said in passing that it is quite reminiscent of certain poetic idiosyncrasies, like Dylan Thomas's "His room so noisy to my own" etc). In this sense, DH constraints are more fundamental to normal discourse than the temporal constraints, in that it is the violation of DH constraints that, given a clear set of pragmatic conditions, causes the "pathologic-locutor" shock in the hearer. On the other hand, non-observance of temporal constraints may easily characterize the casualness of informal spontaneous conversation in face to face situations. Rommetveit (1974 : 60) comments on Moscovici & Plon (1966), who say that eye contact is largely irrelevant in structuring discourse, in the following way: "what brought about informality of style appeared to be spatially defined face-to-face orientation as such". Tentatively formalizing this statement by something like **[+ SITUATIONAL PROXIMITY]**, as a semiotic feature of the communication act, it is quite obvious that what is obtained is a completely

different discourse structure. Informal spontaneous discourse and its characteristic patterning have so far remained almost totally uninvestigated. Allegations to the effect that "all this has been done!", and even that "this was done 25 years ago!" are the direct outcome of either ill will or sheer ignorance or both. According to tentative conclusions by Sinclair & Coulthard (1975), it is far easier to investigated institutionalised spoken discourse, rather than the non-institutionalised variety, viz. informal spoken conversation. Hence, a feature [+ INSTITUTIONALISED], or something approximating it, may emerge as an outcome of the acute need to systematically investigate non-institutionalised as well as semi-institutionalised discourse.

4.0 Displacement in multi-sentence discourse.

4.1 Paraphrasing. Passing on to paraphrasing and the notion of textual paraphrase, the following two major senses could be distinguished in discourse analysis, one more specific, the other one, more abstract:

> (Van Dijk 1972 : 139) If the current conception of paraphrase is also valid for texts, two texts can be said to be paraphrases if their semantic structures are identical and if morpho-syntactic and lexematic surface structures differ. Textual paraphrase, in this sense, characterizes the semantic representations underlying the sentences at the surface of the text. In a more loose way of definition, however, this purely "linear" conception of the SR's of a text seems to be irrelevant; **texts can be paraphrased with sentences in another order, and with fewer sentences than that of the paraphrased text.** In this more abstract sense, a summary may be considered a "minimal" paraphrase.

In this connection, Mohan (1974 : 90) discusses the question of alternative realizations in discourse: in point of fact, all paraphrases are alternative realizations of one and the same semantic interpretation, and as such they are to be considered equivalent. Let us further hypothesize that paraphrasing as a set of processes (both below and above sentence level) is part and parcel of textual competence (cf. Section 1.5).

4.2 Process Typology. On the strength of the tentative definition outlined above, we distinguish the following types of processes (the term is used in the Fillmore 1973 sense) performable on discourse:

(I)	**Below Sentence Level:**	
(a)	Sentence **Reduction**	(via Constituent Deletion)
(b)	Sentence **Expansion**	(via Constituent Addition)
(c)	Sentence **Replacement**	(via Substitution of **all** Constituents)
(II)	**Above Sentence Level:**	(at Partial Sequence pQ level)
(a)	Sentence **Deletion**	
(b)	Sentence **Insertion**	
(c)	Sentence **Displacement**	(i.e. Permutation)
(III)	**Above Sentence Level:**	(at Total Sequence tQ Level)
(a)	Text **Reduction**	(i.e. via pQQ deletion)
(b)	Text **Expansion**	(i.e. via pQQ insertion / addition)
(c)	Text **Replacement**	(i.e. vie pQ or tQ replacement)

All these processual operations (viz. transformations) invariably lead to textual paraphrase: they are all rule-governed and presuppose definite sets of constraints. Whereas (I) implies intra-sentential operations, (II) postulates the acceptance of the "sentence-as-clause" as the minimal operational unit; in its turn, (III) is quite similar to (I)—and even to (II)—with the only difference that it takes pQ as its minimal operational unit, rather than either S—like (II)—, or the sentential constituent—like (I).

The present investigation focuses on (II c) exclusively, i.e. on textual displacement of clausal units which function as independent sentences (with The Conjoiner Deletability Principle leading to the formation of what we have called the "clause-as-sentence"). Given the difficulty of the matter under consideration, it dismisses for purely methodological reasons all intra-sentential reshuffling and substitutive operations, viz. the processes enumerated under (I); in other words, intra-sentential semantic and morpho-syntactic structure is even at the surface level taken

as a constant, not as a variable. To put it very briefly, it takes into account only one variety of paraphrasing:

> (Van Dijk 1972: 139) [...] texts can be paraphrased with sentences in another order.

In the light of what was said in the foregoing pages, it is assumed that there are clear constraints on sentential sequentiality in discourse.

4.3 Discourse-head pairability. It is often difficult to match two Noun Phrases in much the same way in which it is as often difficult to match two sentences or two clauses. Certain—not all—Noun Phrases of sentence linguistics become discourse heads in the analysis of discourse structure. One area of grammar most sensitive to the issue of discourse-head pairability is the category of comparison, and the whole issue of comparative clauses. The question has been very thoroughly examined, among others, by Austin Hale (1970), who point to the ill-formedness of sentences of the type—

(22) * **The committee meeting** was longer than **the table**.

But it is the question of pairing clauses within a comparative structure that is the hardest nut to crack. There are, of course, instances of transition in that clausal pairability is or may be blocked by lack of pairability at the level of the discourse heads. What constraints are, for instance, violated in the following sentence that makes it quite inappropriate in point of discourse structure?

(23) * **Cassius Clay** eats apples, and **Muhammad Ali** drives a Ford.

A similar type of constraint on discourse is violated by the compound sentence

(24) * Princess Christina left very early, but Fru Magnusson talked to practically everybody in the room.

These and many others are in fact instances in which a transition is established between discourse-head pairability within the clause, on the one hand, and the completely different issue of actual inter-clausal pairability in which at least one of the discourse heads functions as a semi-clause:

(25) ** It was five dollars a dozen hotter in Chicago than eggs were expensive in China.

If one were to attempt to **capitalize** the clausal discourse-head equivalents for purely didactic and methodological reasons, one is bound to obtain something like—

(26) ** It was five dollars a dozen hotter in Chicago than eggs were expensive in China.

In such an instance the customary discourse heads have been replaced by full-fledged clauses, though the first clause is obviously deprived of its own discourse head which is presupposed to be provided by the latter one. But the semantic picture is further complicated by the ambiguous status of the lexical item expensive, which, in addition to belonging to the latter clause, seems to require to be granted identical status with its adjectival counterpart *hotter*, viz. an independent element outside the two clauses proper, building, in other words, their comparative conjoiner. But the issue of comparative and other conjoiners is best dealt with by resorting to less extreme demonstration data.

4.4 Clausal pairability. Passing from an analysis of the degree of pairability of discourse heads within the sentence to the far more complex issue of pairability beyond sentential or clausal boundaries, it is data of the following type that we have to cope with:

(27) My grandmother wrote me a letter yesterday and six men can fit in the back seat of a Ford.

(28) * The window was cleaner than Peter talks quickly.

Both examples have received extensive attention in articles by Lakoff (1971) and Hale (1970) respectively, and their apparent (and/or evident) lack of acceptability (and/or appropriateness) has been given more than ample space within the frame of reference of conventional sentence linguistics. But it is worth pointing out at this stage that the semantic interpretation of the actual compound (or complex) sentence may be further complicated by more subtle linkage devices often of an archetypal nature, as is quite the case with the following:

(29) John eats apples and I know many people who never see a doctor.

There is obviously no common discourse head to the two clauses, but if they are viewed together particularly in the light of a culture-specific archetype of the kind

(30)An apple a day keeps the doctor away

a complex paradigmatic relationship is established between the two lexical items ***apple / doctor***, providing a deep semantic connection between the two clauses, which, in their surface structure, evince no common discourse head whatever. The nature of such a linkage procedure is so subtle and complex that it is liable to cancel, at least at first sight, the connective values of the conjoining morpheme ***and***, achieving an instantaneous effect of an opposite nature. It is such demonstration data that Katz & Fodor were most anxious to avoid in 1963, or were, in one way or another, ignorant of: but it is up to the history of linguistics to pass judgment as to which of the two was the greater sin.

For reasons of simplicity, however, the discussion has so far been kept within the conventional boundaries of the sentence, and has discussed language material that is quite characteristic of sentence linguistics. It is easy to see, however, that passing on to the analysis of conversation, paradigmatic relationships of archetypal derivation (be they either culture-specific, or situation-idiosyncratic) become quite common. In all the above examples, clausal displacement, i.e. clausal reshuffling, would not have in any way "improved" the degree of appropriateness of the semantic interpretation. It is high time now to pass on from the discussion of intra-sentential evidence to a discussion of linguistic parameters characterizing discourse structure proper.

4.5 Concatenative discourse structure. Short texts have the great advantage over long ones that they evince a simpler and clearer discourse structure. It is necessary to emphasize again that discourse is viewed as a separate level quite distinct from the level of grammar, and that there is very little in common between sentence structure, as it is understood by sentence linguistics, and discourse structure, as it is understood by the separate and distinct discipline of discourse analysis. A text, for instance, is characterized by junctural typologies and quite specific discourse-head progression, which are quite impossible to identify adequately between the overnarrow boundaries of the sentence. To illustrate this statement, let us have a look at a simple text characterized by two negative features in point of juncture: it does not evince

temporal juncture, and it does not evince any kind of Participant Boundary; but it does evince discourse-head progression all the same:

(31) We love swimming in the sea near our home. We live five miles from Chester. Chester is about twenty miles from Liverpool. Liverpool is a big industrial city. Industrial cities are important to the economy of a country.

It goes without saying that sustained ***and***-conjoining of the type proposed by Katz & Fodor (1963/1964 : 490) would diminish the degree of appropriateness of the above text to a point very close to zero appropriateness. However, identifying discourse-head progression would be the first step towards identifying discourse structure, thus:

(32)

(a) (**we** love swimming in the sea near our **home**)
(b) (we **live** five miles from **Chester**)
(c) (**Chester** is about twenty miles from **Liverpool**)
(d) (**Liverpool** is a big **industrial city**)
(e) (**industrial cities** are important to the economy of the **country**)

Such foregrounding of potential discourse heads delineates inter-sentential (or inter-clausal) linkage devices, and gives an overall picture of one possible structure of this particular text, which could be formalized in the following way:

(33)

(a)	(p	→	→	q)
(b)	(q	→	→	r)
(c)	(r	→	→	s)
(d)	(s	→	→	t)
(e)	(t	→	→	u)

On the basis of this textual diagram, it is easy to see that the text is characterized by such symmetry in the distribution of the discourse heads as well as in their placement in relation to actual clausal boundaries (initial / medial / final) that it is impossible to perform any clause displacement operations on the text without destroying this symmetry, which functions in much the same way in which the temporal juncture functions in the short narratives of personal experience described

by Labov et al. (1967 : passim), and which led them to the important conclusion that a narrative universal can indeed be established on the basis of temporal sequentiality. In a remotely similar way, the various sentences of (31) seem to be locked in position by symmetry constraints. Thus a structure of the type

pq / qr / rs / st / tu

which lies closest to temporal juncture, will be called a concatenative structure, and generally is to be found in didactic texts, of which (31) above is a pale parody.

4.6 Radial discourse structure. But a different kind of text is very likely to pose a completely different type of problem:

(34) The human eye is one of nature’s most marvellously complicated mechanisms. Whenever I think about the human eye, I am amazed at its complexity. Although it looks very simple from the outside, the intricacy of the interior is amazing. It is made up of so many parts, and yet it is so small, that it is difficult to think of it without being astonished. It is really miraculous in its complexity.

Skipping one stage of the analysis (of this text’s information structure), that of DH identification, and passing on directly to a diagram of minimal and primitive formalization, we obtain the following textual structure (devised on the basis of formalization procedures derived from Mohan (1974):

(35)

(a)	(p	→	→		)
(b)	(	→	→	p	)
(c)	(	→	→	p	)
(d)	(p	→	→		)
(e)	(	→	p	→	)
(f)	(p	→	→		)
(g)	(	→	p		)
(h)	(	→	→		)
(i)	(	→	→		)
(j)	(j	→	→		)

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Textual structure is in this case characterized by the occurrence of one single discourse head—***the human eye***—which lies right in the centre of discourse semantics, with all clauses starting from that very same centre and distributed in somewhat radial fashion in relation to it. Each clause is characterized by the occurrence of one discourse head only. There is only one clause (or rather clause equivalent, in the linear manifestation) characterized by complete absence of that discourse head. In consequence, what is different from one clause to another in the organization of the message is not the discourse head, which is constant and identical, but rather the distribution of it—in initial, medial, or final position—in the surface realization of the discourse. Once the clausal structure of a text is identified and formally specified, particularly as an outcome of the operation of the Conjoiner Deletability Principle, the clausal distribution of the discourse head in initial, medial, or final position is subjected to certain constraints, so far uninvestigated (but perhaps related to what traditional stylistics crudely calls "elegant variation"). Such constraints could never be specified by ordinary transformational-generative rules, which are more concerned giving answers to the question WHAT? rather than answering the questions HOW? and WHEN? in relation to overall discourse structure. For want of a better and more accurate label, we may provisionally refer to them as "rhetorical" constraints. Thus, concatenation and radiation are two textual principles which in the above illustrations operate separately, but which, in most "science" texts, for instance, can be found active side by side and simultaneously. Let us now increase the complexity of the discourse structure further and see what happens.

4.7 Variable degree of pairability. Turning again to the notion of pairability, it is quite easy to show that lack of pairability is as obvious within extended discourse as it is within the boundaries of one and the same sentence (cf. data under Sections 4.3 and 4.4):

(36) * John opened the door and organic chemistry was required of all students, because if seventeen were not a prime, then the dairy association would have to back down. Thus, we can conclude that television will have a beneficial effect upon the nation's young.

Such a partial sequence pQ poses special problems in that not only all clauses are well-formed, but also the conjoiners are sequentialized in accordance with definite constraints too. It is extremely easy to apply the Conjoiner Deletability Principle on such a sequence and obtain the following set of clauses:

(37)

(a) **(John opened the door)**
(b) **(organic chemistry was required of all students)**
(c) **(seventeen is not a prime)**
(d) **(the dairy association has to back down)**
(e) **(we can conclude that X)**
(f) **(X (television will have a beneficial effect upon the young))**

The characteristic of this sequence is that there are no abstract connectors in any way linking the various clauses, one reason being that there are no jointly shared discourse heads and that there are no global sets of presuppositions either. The operation of the Conjoiner Insertability Principle does not provide connectedness to a set of completely disconnected clauses. In the same way, the operation of the Conjoiner Deletability Principle can only emphasize the totally artificial nature of conjoiner insertion. Such a sequence evinces a completely free range of displacement at the absolutely highest level, and is perhaps situated at the opposite pole in relation to the text discussed under (31), (32), (33), which, given its rigid symmetry of discourse heads, evinces the lowest possible level of displacement range.

4.8 Cumulative structures. It sometimes happen that certain types of discourse are structured on a repetitive pattern, in which part of the first clause is taken up in the second clause, repeated and slightly expanded; this expanded repetition is taken up in the next clause with a slight extra addition to its repeated segment. Here are three different illustrations of this type of discourse structure, one of which, strange as it may seem, is a transcript of actual conversation:

(38) He attacked the man. He attacked the man in the van. He attacked the man in the van with a hammer. He attacked the man in the van with a hammer which he held in both hands.

(39) Where's the watch? Where's the watch I put in my pocket? Where's the watch I put in my pocket to take to the shop? Where's the watch I put in my pocket to take to the shop because it had stopped?

(40) The thing won't grow. The thing won't grow even slowly. The thing won't grow even slowly in this cold. The thing won't grow even slowly in this cold, you know.

Concatenation, Radiation, and Cumulation are therefore three of the principles (the term is perhaps used in the Gricean sense) which represent some of the possibilities of discourse mapping in situations characterized by the two features [-TEMPORAL JUNCTURE] AND [-PARTICIPANT BOUNDARY].

4.9 Increasing structural intricacies. Let us now gradually increase the degree of textual complexity, and have a look at a text characterized by a parallel progression of two (or even three) distinct discourse heads, which are being carefully balanced against each other. It is at about the level of such texts that the accurate assessment of clausal displacement ranges becomes a useful instrument in obtaining textual paraphrases of one and the same initial discourse structure:

(41) The two brothers were quite different. Bob was tall, fair, and slim; John was short, dark, and fat. Bob was like his mother, and John was like his father. Bob was never happier than when he had something practical to do; John, on the other hand, was clumsy when using his hands. Their sister, Mary, was also clumsy with her hands. Bob rarely spoke to other people unless he was spoken to first, but John was always the centre of a group, talking and chattering as if his life depended on it. In fact, they were so different that it was hard to believe they were brothers.

The text under examination is obviously mapped on the basis of a set of definite principles that permit extensive reshuffling without substantial changes in the overall semantic interpretation of the total sequence tQ. This phenomenon is partly due to the fact that the inter-clausal linkage is based on abstract connectors evincing different degrees of semantic tension. It is quite noteworthy that the present text also allows of extensive clausal deletion, though analysis of paraphrase via clausal deletion does not form the topic of the present discussion. But in this case too, it must be again emphasized that discourse structure is characterized by a specific operation of a principle of dH symmetry, and that there may be a clear limit to displacement when certain symmetry constraints are violated (as already mentioned, "elegant variation" has much in common with the whole issue of symmetry constraints. Here by way of explicitation is a reduction of (41) to sequences of dH's:

(42) ((a) (p & q) (b) (p) (c) (q) (d) (p) (e) (q) (f) (p) (g) (p) (h) (q)
(i) (q) (j) (r) (k) (p) (l) (p) (m) (q) (n) (q) (o) (q) (p) (p & q)
(q) (p & q) (r) (**zero**) (s) (p & q))

Our last illustration evinces a degree of complexity a detailed analysis of which would most certainly go beyond the bounds of the present paper. It is, however, a fascinating piece of semi-organized discourse which is offered as food for thought to the enthusiastic reader:

(43)

(a) (we want to go to America, soon, on the 24th of this month, if possible)
(b) (will you come and see us one day this week, Friday evening perhaps)
(c) (I shall be glad to see you before you go)
(d) (so would Frieda)
(e) (we are not really enemies)
(f) (it is only a question of attitude)
(g) (I send you your book)
(h) (thank you for lending it to me)
(i) (do come and see us one day this week)

A most profitable way of formalizing the investigation of displacement ranges is to resort, for instance, to set theory (as Labov et al. 1967 have done), and try to separate the free clauses from the restricted ones.

5.0 Further theoretical considerations.

5.1 On the nature of displacement. I suggest that the notion of displacement can be successfully used in the investigation of textual semantics in general, and the detection of patterns of assertions and presuppositions in particular. After all, a text could be defined—at least the connectedness aspect of it—as a network or a set of sequentialized assertions accompanied by a far more complex hierarchical network of presuppositions. Displacement can give very useful indications as to the exact possible range of surface manifestations of one and the same underlying semantic interpretation to the extent the same global set of constraints holds. I further advance that discourse mapping could profitably be investigated at both micro- and macro-levels by studying the various aspects of sentential (and/or clausal) processes of

displacement, replacement, deletion, insertion, etc. One of the remote and ultimate goals of this research is to find out to what extent discourse mapping as a **multifarious** process could be tentatively associated with mental activity and with psychological reality (which the generative-transformational approach to language has failed to reflect).

5.2 Rudiments of text structure. There are two fundamental types of texts that may, in the last analysis, be derived on the basis of a remote analogy with the basic structure of the sentence S → NP VP. In the first place, there are texts patterned on the tense markers of the Verb Phrases; this is the large group discussed by Labov et al (1967), and the temporal sequentiality evinced by certain tense markers is classified within the category of **Temporal Juncture**. Texts evincing temporal juncture are classified as narratives; there is a t1-then-t2 type of constraint imposed on the minimal sequence of the type—

(44) He came in and hit her

but within identical syntactic and pragmatic conditions, it is cancelled in—

(45) He hit her and came in

as the temporal constraint imposed upon the juncture is clearly violated, and the semantic interpretation is decidedly changed.

Secondly, there are texts patterned on what might be called Noun Phrase sequentiality, i.e. evincing nominal dH juncture. This second fundamental type of discourse evades definition on the straightforward basis outlined in (44) and (45) for the simple reason that the discourse heads are not sequentialized along the time dimension in the same way. The picture is further complicated by the fact that such discourse heads are primarily located within the Noun Phrase, which is heavily subjected to substitution phenomena—pronominalization, among others—which are far more complex than the similar phenomena operating within the Verb Phrase, where substitution (and consequently, pronominalization) are very restricted indeed, and, in many cases, language specific. All this does not mean, however, that discourse patterned on the basis of temporal juncture (i.e. narrative discourse) does not evince (nominal) discourse head progression; it only means that so far temporal juncture has been more easily detectable, has received more attention, and in general evinces formal characteristics which are more obviously linguistic. Thus, the two types of

discourse structure are in clear cases sufficiently easy to keep apart and single out: (i) VP sequentiality roughly corresponds to narrative, mainly on the basis of tense/time specification, and (ii) NP sequentiality approximately corresponds to non-narrative. This latter type may assume very complicated forms. Both types are heavily subjected to **pragmatic constraints**, in addition to the already well-known semantic and syntactic ones. The relation S (cf. Mohan 1974) in texts not characterized by the feature [+ PARTICIPANT BOUNDARY] is further subdivided in consequence into the following two categories: the relation N (the t1-then-t2 relationship), in other words, (the action1-then-action2 relationship), and (ii) the relation NDH (the dH1-then-dH2 relationship) or to put it otherwise, the nominal discourse head relationship. Both types are of the x-then-y variety implying sequentialization in different types of time (for time/tense typology, cf. Fillmore 1973).

5.3 "Thematic entailment". By way of summary we can say that the two fundamental types of discourse structure are detectable on the basis of two quite distinct types of discourse heads. Both types of discourse are ultimately reducible to the same sequentiality formula, with one important distinction: whereas in one case we are concerned with a "primary sequence" at the level of the semantic interpretation, in the latter case, we have to do with a so-called topic sequentiality which can never in any way be linked to event sequentiality. Thus by replacing the two variables x and y, we obtain two different kinds of formulae in accordance with the syntactic location of the discourse head:

(46) the ACTIONm-then-ACTIONn semantic relationship.
(47) the TOPICp-then-TOPICq semantic relationship.

This type of "thematic entailment" has in a considerably modified version been interpreted as "theme dynamics" (cf. Enkvist 1973b); it can even be analysed in part in terms of topic and comment. However, such studies tend to underestimate the independent existence of a distinct level of discourse.

5.4 Micro vs. Macro. The present discussion has in view two types of textual structure: (a) textual macro-structures, operating at the level of the total sequence tQ, and subject to a set of constraints called **global constraints**: they could roughly be enumerated as (i) topic constraints, and (ii) deictic constraints (time, place, and person deixis, with the time constraints further subdivided into three, as suggested by Reichenbach in 1947); (b) textual micro-structures operating at the level of partial

sequences pQ, usually two-sentence discourse (e.g. "Where is the bicycle? I want to shave this morning!" or "Where is the soap? I'm hungry!") where the main problem is inter-sentence linkage in situations of close proximity, and ultimately the structure of the abstract connector. The terms micro- and macro- structure have been used in a completely different sense by Van Dijk (1972). In our approach, micro- and macro-structures very roughly correspond to texture and structure respectively, as used by the New Criticism, and in particular by John Crowe Ransom in 1940.

5.5 Pragmatic constraints on discourse. In addition to the semantic-syntactic constraints so far investigated, discourses are also subjected to definite sets of pragmatic constraints. In this section we are going to very briefly enumerate the fundamental types of constraints on discourse directly derived from factors which have to do with the set of variables of the communication act. It must be pointed out from the start that such constraints are best analysed in texts characterized by the feature [+ PARTICIPANT BOUNDARY]. Pragmatics is concerned not only with the description of the communication act, and the restrictions imposed upon it, but also with the investigation of its potential relation to message structure.

We distinguish three different types of pragmatic constraints: (a) the **Felicity Conditions**, covering mainly the situational factors; (b) the **Belief Conditions**, which is an all inclusive category, covering roughly the presuppositional patterning of discourse, but also a wide range of other relationships, which may be interpreted at least partially as conversational postulates, or as instances of entailment, expectation, etc; finally, (c) the **Sincerity Conditions**, already quite extensively discussed by formal logic in a different frame of reference.

All three sets, however, share certain common properties: for instance, they are each further subdivided into two. By the side of (i) a **speaker-based** subset, there is (ii) a **hearer-based** subset. Then, in addition to (i) **general** conditions required by all, or most, communication acts, there are (ii) certain conditions which are act-**specific**. Worth noting is also that both sender and receiver are functional roles of the communication act, which leads us to the question of Role Swapping and Turn Taking. These two constructs bring us back to our discussion of displacement: it is due to pragmatic constraints that no displacement can be operated on a two-sentence discourse made up of one question and one answer, and split by a participant boundary. In fact, the structure of turn taking in conversation is a potential area of investigation of displacement which looks quite promising, but given the fact that it involves the pragmatic feature [+ PARTICIPANT BOUNDARY] clearly falls outside the bounds of the present study.

6.0 Final remarks. By way of summary, we wish to advance the following tentative conclusions:

6.1 Irrespective of whether they are conjoined or not, sentences within a text evince various **degrees** of displacement (i.e. have distinctly different displacement ranges), depending on the operation of **global** or **local** constraints. From among the important sets of constraints discussed, mention should be made of the **pairability** and **symmetry** constraints.

6.2 Displacement is one of the very few reliable instruments available for the investigation of what is commonly called "textual competence", and represents the first step towards the detailed study of both **paraphrasability** and text typology.

6.3 Text types (e.g. narrative vs. non-narrative) evince quite specific displacement ranges, with constraints imposed by different clausal components (VP in the case of narrative, and NP in the case of non-narrative).

Special note: The notion of **text** is highly ambiguous in that it can denote either a partial sequence pQ, or a total sequence tQ, or both at the same time. (Hence, the even more ambiguous and even questionable concept of **context**, with some scholars going as far as narrowing down part of it to **co-text**...)

6.4 One question which should be given greater attention is the relation between (i) the empirical question of (temporal) **SEQUENCE** (i.e. the progression in "real time" of the narrative), and (ii) the theoretical question of (hierarchical?) **ORDER** (within the framework of discourse structure proper).

6.5 Displacement is also one of the most reliable procedures for the investigation of both the assertive and the presuppositional structure of a text. The interplay between textual constraints and sentential assertions as well as intra-sentential and inter-sentential presuppositions can provide valid answers which may lead to the emergence into the mainstream of research of so far unexplored fields of investigation (as it seems to have been the case with Pragmatics and Conversational Analysis).

6.6 Non-narrative run-on texts evince clear sets of constraints derivable both from successive "discourse head realization" at the level of linear manifestation in the

surface structure and from specific patterns of inter-sentential presuppositions at the level of the semantic interpretation.

6.7 The rudiments of a clear discourse typology can be derived from the fundamental set of discourse features:

(i) [+ / - PARTICIPANT BOUNDARY]
(ii) [+ / - TEMPORAL JUNCTURE]
(iii) [+ / - DISCOURSE-HEAD JUNCTURE]

6.8 There is clearcut sentence typology too, according to potential displacement range in that there are two fundamental types of units: (i) free units, i.e. clauses which can be freely moved up and down the sequentiality scale; (ii) restricted units, i.e. clauses which are for various reasons (time/tense, topic, symmetry, etc) either completely bound, or bound to various degrees.

6.9 Clausal sequentiality is a direct reflection of speaker- and hearer- based Felicity Conditions, Belief Conditions, and Sincerity Conditions at the level of the whole text.

6.10 It has been stated that the relation between Precedent and Subsequent could be discussed in terms of stimulus and response (e.g. question and answer sequences). It is interesting to note, however, that a similar type of relationship is discussed by Mohan (1974) in terms of bleeding and feeding relations; it is true, though, that he clearly implies the existence of Participant Boundary between the two sentences under consideration. But feeding and bleeding could seemingly be applied to non-dialogued discourse.

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Kartuunen, Lauri. 1969. *Discourse Referents*, Preprint No. 70, International Conference on Computational Linguistics COLING, 38 pp. (cf. also "Textreferenten" (German translation of the same article) in: Ferenc Kiefer, ed., 1972, *Linguistische Forschungen, 1, Semantik und generative Grammatik 1*, Athenäum Verlag, pp.175-198).

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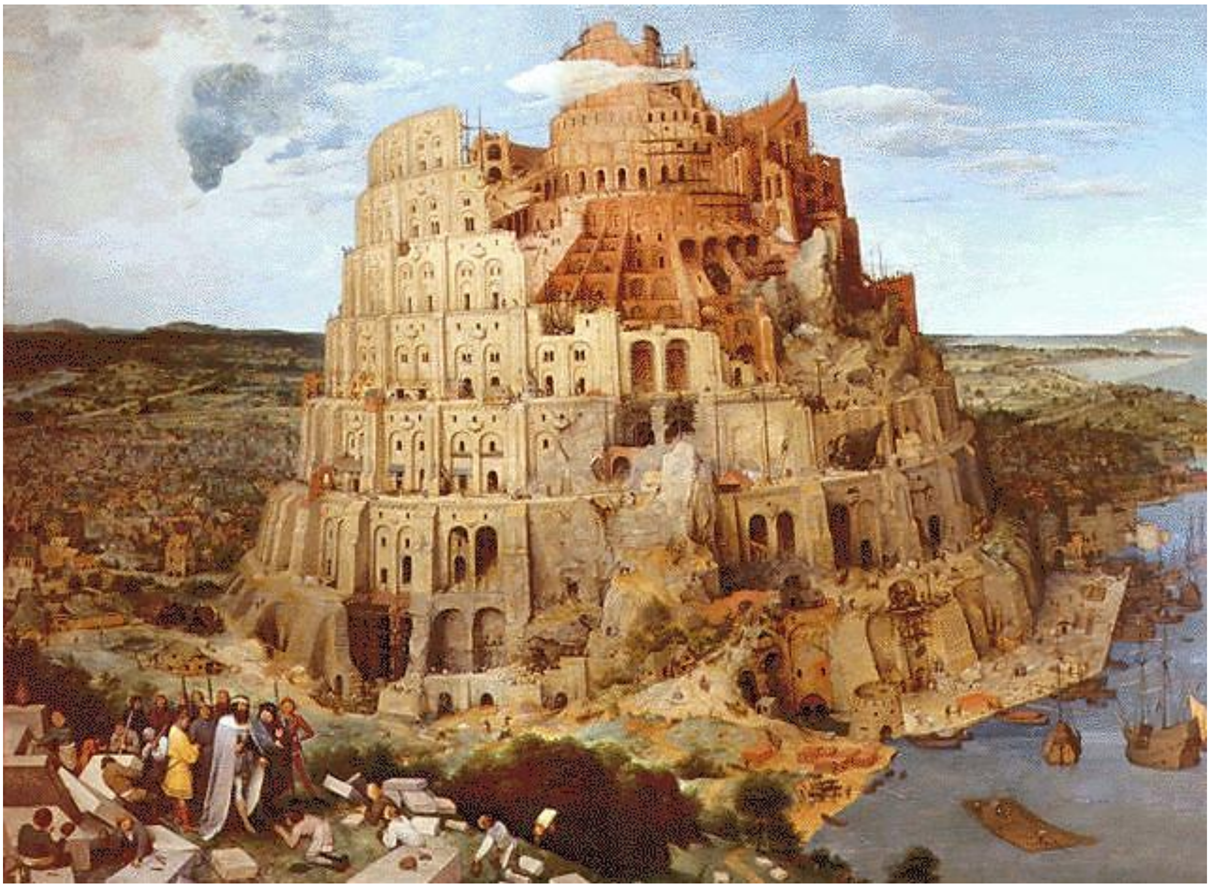
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C. George Sandulescu
Constraints on Discourse
75



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1976. Austin

Mapping Discourse Structure

(Paper given at the **Third International Conference of Nordic and General Linguistics**, held at the University of Texas at Austin between 5 and 9 April 1976, and published in *The Nordic Languages and Modern Linguistics* 3, *Proceedings of the Third International Conference of Nordic and General Linguistics*, edited by John Weinstock, pp.497-502.)

1. Introduction. The present research into discourse arises from the following set of dissatisfactions: widespread discontent regarding the descriptive adequacy of the initial symbol S of any transformational-generative grammar; substantial objections to the basic competence/performance dichotomy (cf. also Linell 1976); inherent inconsistency about the theoretical status of the constructs of context and style (which should ultimately be treated as features of discourse structure); excessive fuzziness of the notion of linguistic intuition. Summarizing all this one begins to wonder what is left of the major ideological premises and fundamental assumptions of present-day linguistic theory.

2. Angle of Approach. There are three options open in mapping discourse structure: (a) the model here proposed for the description of discourse should be ascribed no psychological reality; (b) the model should indeed evince psychological reality (in the sense adopted by Teleman 1976); (c) the model proposed for describing discourse should necessarily evince **communicative reality**, which is clearly superior to the more restricted (b) condition. A model such as the one triggered by the (c) condition must essentially be endowed with the following four components: syntactic, semantic, pragmatic, and axiological. Furthermore, the model must cope with two fundamental types of information—homogeneous as well as heterogeneous (e.g., verbal versus non-verbal).

3. Incipient Outline. The fundamental constructs of the model are (a) the hypermorpheme, and (b) the abstract connector. The underlying cardinal assumption is that the sentence has a greater perceptual validity than the word. As such, it is a

sentence-oriented, rather than a word-oriented model. In other words, it takes the clause-as-sentence—i.e., the hypermorpheme—to be the minimal rather than the maximal unit of description: hence, the 'hypermorpheme' label appended to this category (cf. Sandulescu 1976a). Sustained emphasis on the communicative reality of the model requires constant interplay between linearization and non-linearization: information conveyed via non-linearized structure of discourse may also carry assertions. The fundamental paradigmatic relation between hypermorphemes is the paraphrase relation: paraphrasing is conditioned by discourse structure via appropriateness in discourse. The discourse/text relation is a type/token distinction—hence it becomes quite natural to speak of 'the text of a discourse'. The abstract connector is the major device in the process of linking hypermorphemes across any types of boundaries.

4. Binary Structure of Abstract Connector. The overt matrix Ko of the abstract connector K forms a closed system in sharp contradistinction to the covert matrix Kc of the same connector, which forms an open set. In simpler words, the overt part of it is only 'the tip of the iceberg'. But the Ko/Kc correlation in prospective structures (it must be emphasized that the picture in retrospective structures is quite different) functions as a 'data bank' for the actual linearization of the S-S' axis of manifestation. The open-ended Sz propositional content of Kc is contrasted with the conventionally featurizable content features of discourse structure. There are two fundamental relations between the abstract connector and the linear manifestation: (a) one-to-many; (b) many-to-one. The former is usually and conventionally handled under ambiguity, whereas the latter is essentially reducible to the paraphrase relation. The balance between Ko and Kc is the actual trigger of alternative realizations of one and the same semantic interpretation. The overt matrices contain, among others, indicators of discourse head compatibility, markers of deixis (time, place, and person), and diagrammed accounts of the semantic substance of conventional and non-conventional conjoiners.

Any hypermorpheme, taken in isolation, evinces (a) asserted meaning, and (b) presupposed meaning. Any given set of linearized hypermorphemes evinces in addition 'connective' meaning, derived from hypermorphemic juxtaposition, and reflected in either or both of the twin matrices of abstract connectors. However, it must be pointed out that these abstract connectors are no mere inventories of realizations; they should rather be viewed as ranges of potentials—some being realized overtly, others covertly, and still others not being realized at all. But the model is pragmatics-

oriented: the direct outcome of this is that production matrices never coincide completely with reception matrices. This is indeed one of the major sources of misreading, deliberate or unintentional miscomprehension, semi-intelligibility, etc.

9. Towards a Theory of Discourse Heads. It is here suggested that we do not speak in terms of words and morphemes at all (or whatever learned terms you may use to call them!), but rather in terms of discourse heads (which ultimately are highly sophisticated key-words-and-phrases if you so wish...). A celebrated illustration of this is the so typical Mr Jingle speech, which upon very close linguistic scrutiny is not so jingling as it may seem at first sight. By collocating ***ideas*** + ***sleep*** one manages, for instance, to foreground the acute incompatibility of discourse heads, though the tagging of ***green*** and ***furiously*** largely blurs the endocentric / exocentric distinction, and reduces communicative reality to near zero. ***Colourless*** (sic!) is only intended to increase the oxymoronic mess... (Quite reminiscent all that of Rudolf Carnap's ***Piroten karulieren elatisch***!—in fact, as close as ever Chomsky's 'performance' can hope to come to Saussure's 'parole'!).

A more relevant instance of discourse head incompatibility leading to deviant discourse (cf. Sandulescu 1975 : 302) is provided by the following:

John opened the door and organic chemistry was required of all students, because if seventeen were not a prime, then the dairy association would have to back down. Thus, we can conclude that television will have a beneficial effect upon the nation's young.

Discourse heads like ***John*** and ***the door*** are said to be compatible, whereas ***organic chemistry***, ***a prime***, ***the dairy association***, and ***television*** are not compatible within this particular discourse structure (though each clause taken separately is perfectly **well-formed**—in the sense given the term by TG grammars). The overall impact is otherwise quite similar to the Casual spoken discourse is characterized by a completely different type of discourse head compatibility than non-casual written discourse: the latter evinces far tighter zonal constraints than the former. It is this very principle that accounts for the rather jerky and random nature of one, and the more sustained and relatively smoother nature of the other. Casual communication does jump from pets to politics, non-casual communication does not.

In point of linguistic materialization, the discourse heads are very often Noun Phrases, but in narrative discourse of the 'telegraphic' kind in particular (e.g., ***Veni,***

vidi, vici), it is the Verb Phrases that take up the discourse head function, with severe sequentiality constraints imposed upon them. A fast reader does take in text in terms of discourse heads; the major operation that he performs is that of pertinent discourse-head identification on the basis of (a) textual assertive structure, (b) textual presuppositional patterning, and (c) previous exposure to similar discourse. A well-reconstructed retrospective structure will tell the experienced reader a great deal about the corresponding prospective structure in point of discourse heads.

Discourse heads are communicative units which are hierarchically organized, and consequently they do indeed structure discourse. It is the discourse-head sequentialization that ultimately determines syntactic structure, particularly from a communicative point of view, rather than vice versa. A theory of discourse heads must take into account both conventional paradigms of the type of 'referential hierarchies', which are in the process of being described by Pike (1975), and non-conventional paradigms, which are for the most part the nonce juxtapositions normally occurring in casual spoken discourse, where a process of idiosyncratic value ascription is taking place.

10. Conclusions.

1. In addition to laying the foundations for a possible explicit description and formalization of discourse which should go far beyond the highly restrictive boundaries of sentential linguistics, the model cursorily sketched here also provides an explanation of language function via discourse structure.

2. The model leaves open the question as to what the actual relation is between discourse structure and information structure: the nearest point of contact and basis for an analogy between them are provided by a theory of discourse heads, coupled with a network of referential hierarchies, perhaps as derived from Pike.

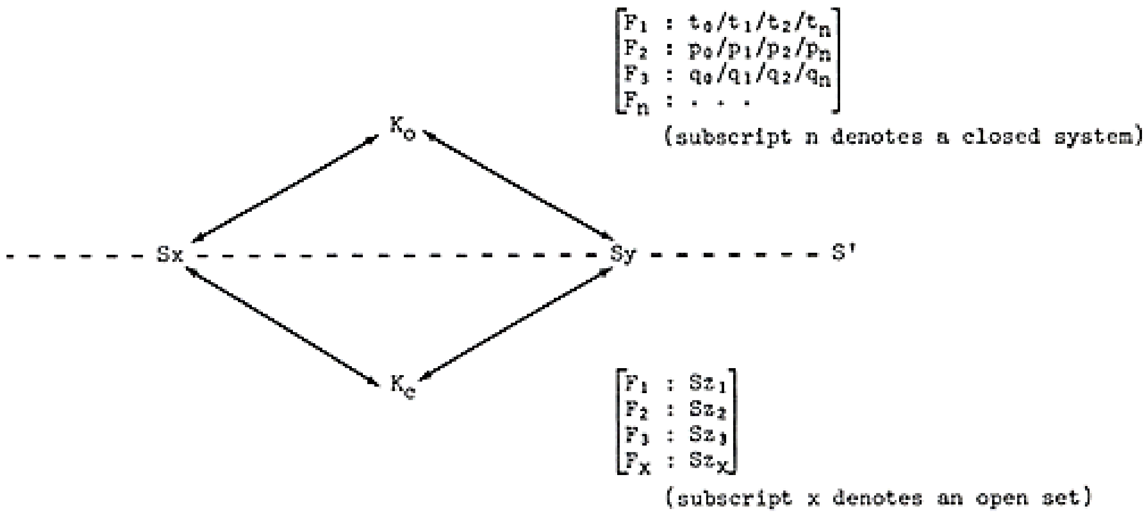
3. It has become a commonplace to state that text as a construct has no theoretical status: the present research is aimed at proving, however, that discourse is a fundamental descriptive category, on a par—in point of importance—with the initial symbol S of modern conventional linguistics. The whole field of research is in fact triggered into existence by the unsatisfactory descriptive adequacy of the initial symbol S.

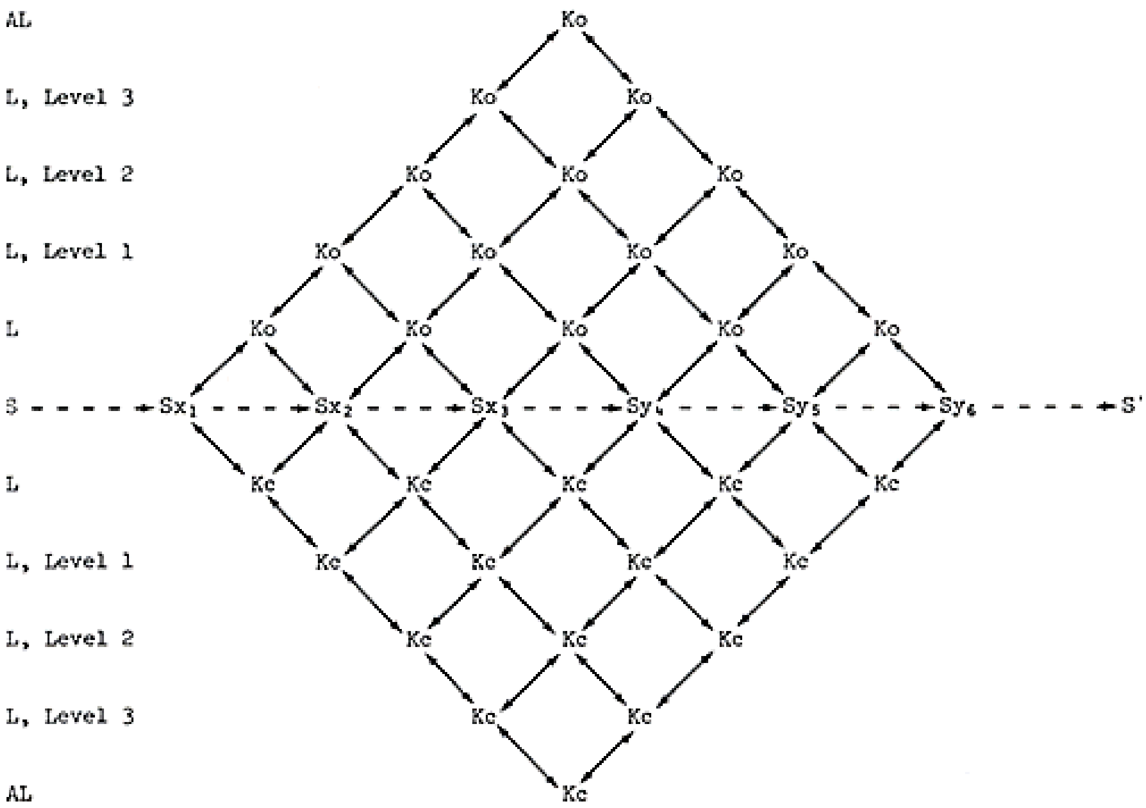
4. Sentential word order is determined by discourse structure and not vice versa. The reason is simple: sentential word order is ultimately triggered from within the abstract connector. In consequence, it is not at all a mere feature of sentence structure, as conventional linguistics vehemently propounds.

5. The construction of an explicit model for the description of language segments larger than the sentence with data derived from a great number of widely different languages is evidence not only in support of **universals**, but also—and more significantly—in support of **differentials** of discourse.

6. The communicative bias emphasizes the inter-personal (i.e., micro-socio) rather than the intra-personal (i.e., psychological) parameters; hence, the stress on prospective and retrospective structuring as well as on the discourse heads.

7. Based on a close interrelationship between hypermorphemes and abstract connectors, the model provides a globalistic and wholistic approach to language description, rather than an atomistic one. Assigning the hypermorpheme the status of minimal descriptive unit, the point is forcefully being made that the 'clause-as-sentence' has greater perceptual validity than the lexical item.


F1 : t0/t1/t2/tn
F2 : p0/p1/p2/pn
F3 : q0/q1/q2/qn
Fn : . . .
(subscript n denotes a closed system)
Ko
Sx
Sy
S'
Kc
F1 : Sz1
F2 : Sz2
F3 : Sz3
Fx : Szx
(subscript x denotes an open set)


AL
L, Level 3
L, Level 2
L, Level 1
L
S
L
L, Level 1
L, Level 2
L, Level 3
AL
Ko
Kc
Sx1
Sx2
Sx3
Sy4
Sy5
Sy6
S'

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1976. Stuttgart

Theory and Practice in Analysing Discourse

(Paper given at the Stuttgart Congress of Applied Linguistics in 1976, and published in the *Proceedings of the Fourth International Congress of Applied Linguistics*, pages 349 to 365.)

0. Epigraph:

Language is a labyrinth of paths.
You approach from one side and know your way about;
you approach the same place from another side
and no longer know your way about.

Wittgenstein, *Philosophical Investigations*, 203

1. Introductory. Trying to establish points of comparison—that is, similarity and dissimilarity—between two recent approaches to the study of language is an enterprise fraught with the dangers of both oversimplification and rash generalization. But in the hope that the advantages of such a correlation study across both geographical and terminological boundaries will far outweigh the risks, the following critical, and even polemical, remarks are considered necessary at this early stage of development of the subdiscipline.

The tremendous recent interest in language units larger than the sentence is just another 'explosion' in the wake of the peaceful 'population', 'information', and 'book' explosions we have all witnessed in the last 30 years as follow-ups of the 'revolutions' of 50 or 250 years ago. Linguistics as a rigorously scientific discipline is therefore called upon to cope with what we are here calling the 'text/discourse explosion'. Given the almost instantaneous outburst of attention, the major pitfall has been investigatory parallelism, rather than concerted effort; and it is this very attention paid to units larger than the sentence that has triggered substantial research emphasis on pragmatics.

2. The issue of terminology. Terminological discrepancy is directly derived from (a) investigatory parallelism, and (b) deliberate disregard of similar (or even identical) research results obtained elsewhere (usually beyond national boundaries).

Consequently, the first question to be asked, before passing on to illustrations, is how important is the issue of terminology. In the opinion of Roman Jakobson (1974, 1975), an opinion which we fully share, the question of terminology is highly important in present-day linguistics (for example French *traits pertinents* being a mistranslation of the original distinctive features).

PROPOSITION 1: What is called ***Discourse*** in English-mediated research is called Text on the Continent (Germany, Russia, Scandinavia).

Terminological discrepancy has far-reaching theoretical implications: an even cursory look at any recent dictionary of linguistics would support this view. By way of illustration, here are the title words of 43 different entries under Text of the latest German dictionary (as against only one in the *Dictionnaire de linguistique*, Larousse 1973):

(Lewandowski 1975 : 733ff)

TEXT

1. Text**ANALYSE**
2. Text**ANFANG**
3. Text**ÄUSSERUNG**
4. Text**BASIS**
5. Text**BEGRENZUNG**
6. Text**EINHEIT**
7. **TEXTEM**
8. Text**ENDE**
9. Text**ERWARTUNG**
10. Text**ERZEUGUNG**
11. Text**EXEMPLAR**
12. Text**FORMULAR**
13. Text**FUNKTION**
14. Text**GEMEINSCHAFT**
15. Text**GRAMMATIK**
16. Text**HAFTIGHEIT**

17. Text**INTERPRETATION**
18. Text**ISOTOPIE**
19. Text**KOHÄRENZ**
20. Text**KONNEXION**
21. Text**KONSTITUENTEN**
22. Text**KONSTITUTION**
23. Text**KRITIK**
24. Text**LINGUISTIK**
25. Text**PARTITUR**
26. Text**PHORIK**
27. Text**PRAGMATIK**
28. Text**REFERENZ**
29. Text**REPRODUKTION**
30. Text**REZEPTION**
31. Text**SEMANTIK**
32. Text**SORTEN**
33. Text**STRUKTUR**
34. Text**TEMA**
35. Text**THEORIE**
36. Text**TIEFENSTRUKTUR**
37. Text**TYPOLOGIE**
38. **TEXTUALITÄT**
39. textuelle **BEDEUTUNG**
40. Text**VERARBEITUNG**
41. Text**VERSTEHEN**
42. Text**VERWEIS**.

Considering such terminological discrepancy as a point of dissimilarity at the meta-level, but as ultimately instancing similarity at the level of the object language (the language segments under examination being identical as to length and extent), a minute examination of the existing books, articles, research reports, and conference papers classifiable under the key words Text / Discourse shows the following clearcut polarization of focus of research.

3. Two fundamental directions of research. The essence of the difference resides in overemphasis on the theoretical model in one case, and a plethora

of field data in the other case. For operational as well as alliterative reasons, let us pitch Bielefeld against Birmingham (though not so much Konstanz against California), and survey research performed by the groups there, particularly as crystallized in the shape of two recent books—Sinclair & Coulthard (1975) and Petöfi & Rieser, eds. (1973). One of the crucial statements to be made here, perhaps vulgarly derived from the fact that the two directions of research do not quote each other at all, is the following:

PROPOSITION 2: Whereas TextLinguistics TL is definitely a model-oriented approach to language units larger than the sentence, Discourse Analysis DA evinces many of the characteristics of a data-centred approach to much the same language units.

PROPOSITION 3: A data-centred approach to discourse means in the last analysis that a significant research result is obtained as an outcome of a study of a collection of instances, especially if these have been classified. (An excellent illustration of that statement is provided by Sinclair & Coulthard 1975).

PROPOSITION 4: A model-oriented approach to discourse takes as a research result only a generalization, which can be evaluated against rival generalizations, whether based upon many or upon few instances. (An excellent illustration of that statement is provided by Petöfi and Rieser, eds. 1973).

Alternative (or complementary) ways of proving the correctness of the above statements are provided both via quantification of data in already published material and the qualitative assessment of the nature of such data (cf. Section 5).

4. The status of certain theoretical constructs. The theoretical construct text grammar, which characterizes most research on the Continent, postulates (rather than demonstrates) that texts evince grammar in much the same way in which sentences evince grammar.

PROPOSITION 5: Whereas the discourse analyst has as his major goal the detection and description of discourse structure, the fundamental concern of the text linguist is "the formal set-up of an empirically adequate text grammar (Petöfi in Petöfi & Rieser eds. 1973 : 1).

This happens to be a very important point of difference between TL and DA in that the meta-category labelled grammar is assigned completely different areas of operation. Here first is one representative point of view regarding the status of this theoretical construct:

> ... "sentence" is regarded as the highest unit of grammar. Paragraphs have no grammatical structure; they consist of a series of sentences of any type and in any order. [...] there are no grammatical constraints [...] at the level of discourse. (Sinclair & Coulthard 1975 : 20)

On the other hand, and pitched clearly against that statement, the text linguist makes it a profession of faith to declare that—

> The set-up of the text grammar is based on the hypothesis that text grammars can and should be regarded as generalized (and expanded) sentence grammars. (Petöfi in Petöfi & Rieser eds. 1973 : 8).

Another highly controversial issue is that of **directionality** (cf. e.g. Eliasson 1973); TL operates on the firm assumption that texts evince a deep structure in addition to their linear and manifest surface structure:

> ... the sequence of operations [...] is not unidirectional, it leads, on the one hand, from deep structures to the semantic representation and, on the other hand, from deep structures to surface structures. This model accounts for the possible readings of the deep structure, but it does not explain the syntactical ambiguity of the linear manifestation nor does it allow to enumerate the admissible paraphrases of the semantic representation. (Petöfi in: Petöfi & Rieser eds. 1973 : 9)

DA expresses doubts, for the time being at least, about the profitability of postulating a deep structure in delineating the systematic patterning of discourse: certain investigations completely replace deep structure by semantic interpretation, others advance the suggestion that it is far too early to make pronouncements on matters of such capital importance, and which have still received insufficient empirical investigation.

PROPOSITION 6: The question of directionality (deep to surface versus surface to deep) is central in TL, and almost inexistent in DA.

5. The nature of the data. Having seen that everything distinguishes and differentiates DA from TL except the actual language span under investigation, it would seem that the two approaches deal with the same kind of data.

PROPOSITION 7: Though the data happens to be identical, it is only the theoretical models imposed upon it that are widely different.

That might have been true within the restricted frame of reference of sentence linguistics, but it is not at all valid within the far wider and considerably more complex frame of reference of discourse / text: it is the very nature of discourse data that provides the Wittgensteinian labyrinth.

The history of linguistics is replete with instances of sudden changes of attitude as to what actually and ultimately is to be considered language data (cf. Sandulescu 1975a : 128). For purposes of simplification again, we are going to divide discourse data into two major categories—namely, we distinguish clearly between discourse data which is spontaneous and authentic (that is, not expressly produced for didactic or research purposes), or what we prefer to call (a) token data, and, at the other end of the scale, (b) type data. This distinction is fundamentally based on the type/token dichotomy, symmetrically paralleled by the emic/etic filtration. Category (a) ultimately refers to researcher-external data, whereas category (b) covers researcher-internal data, clearly including the 'intuitive' variety; in other words—

PROPOSITION 8: Type data is competence data, whereas token data is performance data.

This kind of explanation, however, would at once lead us to a discussion of the merits and demerits of one theoretical model over another; the theory is summarized, quite imperfectly, by the following dichotomies: (Saussure:) Langue / Parole; (Hjelmslev:) System / Process; (Chomsky:) Competence / Performance; to which one might parallel (Herdan:) Type / Token; and (Pike:) Emic /Etic.

Dressler (1972 : 13) makes the extremely important and highly relevant point that a texteme is an emic text. Such a way of solving the issue would be quite misleading in that it shifts the focus of attention from the actual nature of the data to the ultimate essence of the theoretical model resorted to. This binary distinction is in consequence not only an aspect of the model, but also affects the very nature of the

data. It is a notorious way of doing away with 'redundant' discourse material such as silence fillers (the ultimate role of more or less deliberate interjections, hesitations and slip-of-the-tongue phenomena, and variable stretches of either silence or discontinuity within the semantic interpretation of discourse structure has not even been touched upon by current research; analysing the structure of spoken discourse, it is clearly noticed that many such phenomena do go down into the semantic interpretation and / or deep structure).

This whole discussion revives the questions:

1. Is a competence model in any way superior to a performance model?
2. Does the addition of a pragmatic component to the model in any way modify the competence / performance balance?

This is indeed an acute dilemma for the future of both TL and DA; thus the following three alternatives present themselves:

PROPOSITION 9: The imposition of pragmatic information upon discourse structure automatically modifies, in the opinion of some, the nature of the theoretical model, turning it into a radically performance model; the latter, it is conceded, is not at all inferior to, but rather on a par with, the so familiar competence model of generative grammar.

PROPOSITION 10: The emergence of a pragmatic component within the model carries with it the placement of competence and performance at the two extremes of a cline (or scale) separated (or united) by an infinity of intermediate stages variously called: communicative competence (Hymes); textual competence (Van Dijk); rhetorical competence (Corder); abstract performance; performative competence; Performanzkompetenz (Harig & Kurz); performance with zero competence (Gaeng); grammatical competence (Campbell & Wales); meta-competence; pragmatic competence (Wunderlich, Habermas), etc.

PROPOSITION 11: A clearcut distinction between competence and performance along the lines suggested by Chomsky (1965 : passim), in the steps of Saussure (without him ever formally acknowledging that!) is not exactly useful for the specific investigation of discourse structure and is liable to lead to crisis rather than to the straightforward solution of undecided issues; in consequence, it should better be dropped.

By way of illustration of this very last view here is how one particular research project formulates the decision-making processes involved in the selection of both field methods and research strategies:

> ...it was not possible to take over the distinction between competence and performance in any terms similar to its characteristic use in syntax. (Sinclair & Coulthard 1975 : 120)

6. Data authenticity: binarity or continuum? The nature of linguistic data has not exactly been a favourite topic of discussion among linguists, particularly ever since Chomsky branded the notion of corpus. Avoiding it, however, we have distinguished between type data and token data, as two distinct categories of discourse material, both of them equally profitable (though hierarchically differentiated) particularly at the present stage of research into the nature of discourse, when we are still fumbling in our quest for the major theoretical constructs of the subdiscipline. Type data is but seldom given real data status in that it never evinces authenticity (and/or spontaneous- ness) and hardly ever meets data quality control requirements (cf. Naroll 1962). In addition to 'intuitive' data, this category also includes the 'normative' data, as provided by, say, standard national dictionaries, and which represents the slightly more objectified material that is vital for a wide range of computational studies. Thus, it may be quite profitable to operate with type data at a level of description and investigation situated below the sentence. However,—

PROPOSITION 12: It is an illusion of profitability to operate with type data in **advanced research** at a level beyond the sentence.

For it is particularly at this point in the investigation that token data becomes a necessity. By token data we understand spontaneous and authentic, externally and objectively validated data, but not necessarily belonging to a closed corpus. It is token data that is the direct outcome of (a) field work, and (b) active observation in discourse analysis, conversational linguistics, psycholinguistics, sociolinguistics, cultural (or social) anthropology, etc. It is also token data that lies at the basis of the most solid case studies in these fields.

Transcriptive procedures of recorded field data provide means to operate variation on the cline between type and token in analysing discourse: all transcription of discourse is ultimately a process of abstraction with a lot of information that is left out, existing with equal rights by the side of the information that is put in, a process

quite analogical with the shift from performance to competence. In a very rigorous sense, the only faithful 'transcript' of a recording is the recording itself.

PROPOSITION 13: No token data is a hundred per cent token data on the ideal scale, as it has already undergone a process of abstraction of one kind or another, which has brought it away from it token essence, and pushed it to some extent down the cline towards type data.

Very often this abstraction push may be quite negligible; but in the analysis of discourse, the presuppositional patterns brought about by, say, segments of silence (usually neglected in the transcripts) may operate considerable modifications upon the semantic interpretation of the segment. The investigation of discourse silence, though not so far forming the habitual hunting ground of the linguist, may gradually be forced upon him by the increased significance acquired by semantic and pragmatic parameters over the purely syntactic ones (cf. Sandulescu 1975b).

7. Spoken versus written. There is still another topic that requires attention as part of our TL/DA comparison, namely the mode of discourse (cf. Spencer & Gregory eds 1964 : 87ff).

PROPOSITION 14: Whereas TL proceeds on the Scale of Mode (or Medium) of discourse from [- SPOKEN], and hopefully towards [+ SPOKEN], DA (with very few exceptions) proceeds on the same Scale of Mode (or Medium) from [+ SPOKEN], but hardly ever reaching [- SPOKEN].

In other words, there is distinct polarization on the mode dimension too, with TL almost exclusively focusing on the [- SPOKEN] end of the scale, and DA evincing a tendency to focus on the [+ SPOKEN] end of it. In spite of the open professions of faith, the focus of interest is rather static, and statistically speaking, evinces but little genuine tendency to move up or down the mode scale. One fleeting justification of the fact that TL carries a [- SPOKEN] focus of research could well be that the investigation of 'written discourse' implicitly carries with it a higher level of abstraction and a considerably greater degree of logical organization; it is certainly closer to type data and lends itself more easily to giving a more pregnantly concrete image of what 'competence' really looks like.

8. Retrospects and prospects: sights and insights. The fundamental question which we have not yet managed to give a clear answer to is still the following: Are we faced with two distinct subdisciplines of linguistics, TL and DA, accidentally ignoring each other, or is it one and the same subdiscipline evolving along diverse lines in diverse research settings? We tend to give a simple answer and say that it is one and the same subdiscipline dealing with language units larger than the sentence, be they spoken or written. A survey of the points of permanent difference and the points of possible rapprochement shows that the terminological gap is there partly because discourse has no suitable and adequate equivalent in several European languages, and text thereby provides a too facile and easy replacement, partly because hardly any language could match German string compounds...

The theoretical attitudes, too, may well remain divergent: one aiming at lofty theory, the other quite content to stay in the lower spheres of practicality and practicability, and cater primarily for the further training of the average classroom teacher of the national language. But an important point of convergence is the fact that TL is quite aware of the acute need to expand — both quantitatively and qualitatively — the range of the data that is being taken in; sooner or later, basically on account of pressure from outside, it will manage to incorporate, we hope, an acceptable spectrum of discourse data. There is still a question, however, that the present paper cannot hope to give an answer to, namely — To what extent is there a chance of sensible and sustained dialogue between the two approaches? The extent to which TL and DA will go on ignoring each other is a problem the solution of which depends ultimately on the amount of pressure put by societal research tasks upon the subdiscipline in question. The other worrying point regarding TL is that it tends to deprive conventional linguistics of its fundamental functions: *"Ausgangspunkt einer Phänomenologie des linguistischen Objekts ist die Texthaftigkeit des originären sprachlichen Zeichens,"* says P. Hartmann (1971 : 12), and S. J. Schmidt (1973 : 10) adds: *"Diese Entwicklung hat sich über einige bedeutsame Stadien in der Forschungsgeschichte der Linguistik vollzogen, die unter dem Schlagwort zusammengefasst werden können: 'Von der Satzgrammatik zur Textgrammatik' "*. All this boils down to the following postulate:

PROPOSITION 15: TL is a more comprehensive approach to language study than conventional linguistics, both more suitable and more complete; as such, it is bound to replace conventional linguistics by ousting and eliminating narrow sentential preoccupations.

DA approaches, on the other hand, seem to be far more modest on this particular point in that they express a clear awareness of distinct goals and specific targets, and consequently pledge non-interference in the internal affairs of sentential linguistics, with the newly emerging subdiscipline of DA modestly and peacefully coexisting alongside its more venerable and far more respectable counterpart.

9. Pragmatics—the gate-crasher. Immoderately high hopes have in the last few months been placed on pragmatics, proof thereof being the very name of the Congress section in which this paper has been given (it must be said, by way of digression, that its actual name—Pragmalinguistics—is a misnomer derived from obvious theoretical confusion; what is probably meant is 'linguistic pragmatics', as opposed to the pragmatics of non-verbal communication). But by pragmatics, different approaches understand different things: a good illustration is the question sometimes asked, ludicrous as it is, whether pragmatic presuppositions belong to semantics at all. It is only too often forgotten (Chomsky himself having initiated this voluntary oblivion...) that language is but another system of signs; and all semiotic systems, language too therefore, are characterized by three distinct components—a syntactic component, dealing with item sequentialization (both below and above sentence level), a semantic component, dealing with problems of meaning, and a pragmatic component, dealing with all the 'inter-personal' aspects of the communication act and the communication situation (cf. the interpersonal function of language discussed by Halliday (1973 : 105ff), alongside the 'ideational' and 'textual' functions. As such, all genuine linguistics is pragmatics-oriented:

PROPOSITION 16: To the extent linguistics does not evince a pragmatic component clearly, it is bound to remain pseudo-linguistics.

One of the fundamental tasks of pragmatics in assisting discourse analysis is to establish a consistent situational typology on the basis of the following factors: role interplay, role relationship and size, role structure (quantity and quality), channel range, channel switch, repertoire range, code availability, turn taking, turn rules, turn claiming, turn yielding, turn suppressing, turn opening, turn closing etc. Most micro-sociolinguistic investigations can thus be bracketed under pragmatics. One further task of pragmatics in order to promote the structure of discourse mapping is to provide a consistent and harmonious integration of the verbal into the non-verbal, and

of the non-verbal into the verbal (which any Chomsky-based approach would label as patent heresy...):

PROPOSITION 17: Both TL and DA have so far lamentably failed to provide a solid bridge between the verbal and the non-verbal, this being the outcome of the total disregard of the concrete semiotic parameters of the communication act.

To go on speaking about the English used by teachers and pupils (or doctors and patients, for that matter) without a minimally rigorous analysis of the pragmatic factors characterizing the particular communication situation, may and does look to TL both subscientific and amateurish, and boils down to a random collection of situations reminiscent of conversation manuals. To go on talking, however, about vague, abstruse, and unnecessarily abstract theoretical constructs (cf. Lewandowski 1975 : 733-69, for a relatively representative sample) with insufficient empirical substantiation sounds both futile and impractical, when confronted with the more concrete DA research targets. The present critical survey of the literature related to both TL and DA emphasizes that what is needed in order to bridge gaps like the one separating lofty TL from pedestrian DA is solid and extensive descriptions of the various pragmatic parameters of the respective communication acts and situations as well as an outline of the specific features of role structures.

10. Conclusions. This paper has been an attempt to bridge gaps.

10.1 Both TL and DA, as distinct approaches within the same subdiscipline, suffer acutely, but in different ways, from what Roman Jakobson (1974, 1975) has called 'glottocentrism' in that they evince a total inability to cope adequately, suitably and harmoniously with extra-linguistic information.

10.2 DA is a data-bound approach, deriving its theoretical constructs directly or indirectly from previously collected token data; TL is an almost exclusively model-centred approach in that it fits the data to a theoretical model, which ultimately is an adapted extension of sentence linguistics.

10.3 TL views text as an abstract object (cf. Petöfi 1973 : 3); in the other approach, 'discourse is produced in real time' (cf. Sinclair 1975 : 34).

10.4 Both approaches are characterized by theoretical inconsistencies of various types, ultimately caused by the absence of a background model wider than linguistics (as this discipline has so far been understood). This leads to the incapacity to accommodate 'non-glottocentric' types of information.

10.5 The data-centrists happen to be generally permissive and tolerant towards other approaches; the model-centrists are fundamentally exclusivistic (e.g. Rieser 1975). This statement has ultimately to do with the sociology of linguists, that is, who reads whom, and for what purposes; the philosopher of science Thomas Kuhn (1962) would modify this statement to cover also who quotes whom and to what ends.

10.6 One approach has the conviction that it caters for highbrow linguistic tastes, whereas the other approach is quite aware of the fact that it aims primarily at the lowbrow.

10.7 In terms of future research—that is, long-term perspectives as well as short-term ones—, we could possibly distinguish two tendencies (or trends) in DA: (a) a linguistics- and language-based trend, and (b) a semiotics-based approach with powerful emphasis on verbal/non-verbal (cf. S.W.P.D.A., No.1 (September 1974), p. 17).

10.8 In the foregoing discussion, we have presented TL and DA as homogeneous approaches, which very obviously they are not. Though we are quite aware of certain oversimplifications, it must be emphasized that it is part of the endeavour to extract the homogeneous features out of relatively heterogeneous and diverse material.

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Note: The present list of references is, for reasons of space, only the 'tip of the iceberg': a relatively complete list would have to include more than 500 titles. However, no omissions are purely accidental in the subsequent enumeration. And quoting myself has merely been done for the sake of brevity.

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1976. Helsinki

Structuring Discourse Connectors

(Paper prepared for the Third Scandinavian Conference of Linguistics, which took place in Helsinki, in October 1976. Part Two of the present paper had by then already been submitted for presentation at the 1977 Vienna Congress of Linguists.)

Abstract

1. It has repeatedly, but inadvertently, been stated that a standard generative-transformational model can accommodate discourse. The purpose of the present study is to point to the complexity of the issue, and tackle in depth inter-sentential connectedness in its overt and covert varieties.

2. The fundamental unit of discourse is the hypermorpheme (defined as a minimal sentence); in a partial or total sequence of hypermorphemes, it is the function of abstract connectors, evincing both overt and covert matrices, to establish cohesive links between non-conjunctioned sentences. Such hypermorphemes, by virtue of their non-conjoining, do not and cannot hang on the same tree-diagram.

3. Abstract connectors can be viewed from three distinct angles: (a) they may be assumed to lack psychological reality, quite in line with a standard generative approach; alternatively, and in a substantial modified version, (b) they are assigned at least a certain degree of psychological reality (with evidence provided from a wide range of languages); finally, (c) in addition to a minimum of psychological reality, discourse connectors should necessarily have communicative reality: sociolinguistic (i.e. inter-individual) evidence must in consequence be put on a par with psycholinguistic (i.e. intra-individual) arguments.

4. Discourse connectors are heavily structured: various types of discourse information are, either deliberately or unintentionally, relegated to one or another of the matrices. The possibility of structuring the covert matrix on the basis of presuppositional information has been discussed in Sandulescu (Turku/Åbo

November 1975). In its turn, the overt matrix is structured via (a) syntagmatic relations between discourse heads, (b) paradigmatic relations between the same units, and (c) information extraneous to the discourse heads.

5. Discourse connectors are no mere inventories: they restructure segmental information at "non-segmental" level, and constitute the empirical foundation of a probable "competence to paraphrase discourse regardless of hypermorphemic boundaries" (quite unattainable by mechanical means in the foreseeable future). This is particularly obvious in crucial moments of role switch, when listener/reader becomes speaker/writer and then proceeds to restructuring foregoing discourse differently. Ability to recall discourse heads in the first place rather than precise syntactic structures is strong evidence in support of this "competence of use".

> N.B. The C.G. Sandulescu paper given at Turku/Åbo in November 1975 was entitled "Presupposition, Assertion, and Discourse Structure"; it was presented as part of a Symposium sponsored by the Åbo Akademi.

(24)
(A) ((but) (my dear fellow) (excuse me for interrupting you) (you seem to be X-ing (a))) # (for) (after all) (even you must admit (that (b) (than (c)))) #

(B) (b') (than (c')) # (d) # (e) # (f) than (g)) # (h) # (i) # (j) (k(l(that m)))) # (it is (n) (or (o)) # (p(q) # (indeed (r) (and when (s)))) (because (t) (which (u(v(who w)))))) # (no) (Avoc)) (x) # (y(and z(of whose (aa))))) # (bb(because (cc(and(dd(ee)))))) # (ff) # (gg(who(hh (how(ii)))))
(A) (Bvoc)(jj(as if(kk))) # (ll(and(mm))) # (nn(but(oo))) #

(The actual semantic interpretation of this whole text is left to the reader's literary imagination. Have a try!)

1.0 Standard Conjoiners:
1.1 Co-ordinative (logical connecters): and, but, or; for.
1.2 Subordinative: that, than, how, who, of whose, when, which, as if.

2.0 Non-standard Conjoiners:
2.1 Continuatives: after all, of course.

2.2 Attitudinal Disjuncts: indeed, possibly.
2.3 Response Markers: yes, no.

3.0 Parentheticals:
3.1 (sentence) excuse me for interrupting you
3.2 (clause) you must admit
3.3 (phrase) my dear fellow, in my opinion
3.4 (word) NAME (in vocative function)
3.5 (morpheme) well

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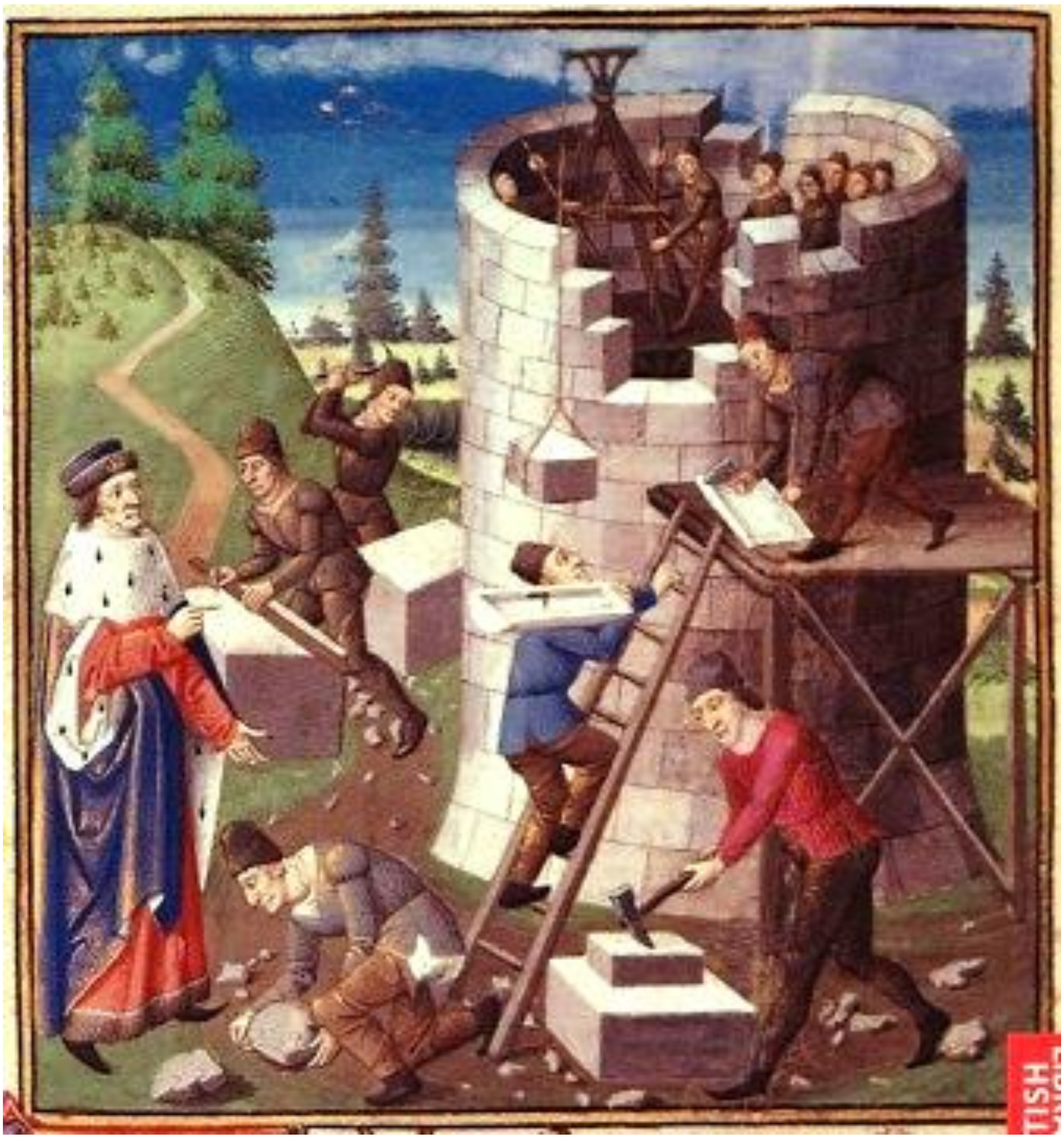
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Ernest: But, my dear fellow—excuse me for interrupting you—you seem to me to be allowing your passion for criticism to lead you a great deal too far. For, after all, even you must admit that it is more difficult to do a thing than to talk about it.

Gilbert: More difficult to do a thing than to talk about it? Not at all. That is a gross popular error. It is very much more difficult to talk about a thing than to do it. In the sphere of actual life that is of course obvious. Anybody can make history. Only a great man can write it. There is no mode of action, no form of emotion, that we do not share with the lower animals. It is only by language that we rise above them, or above each other—by language, which is the parent, and not the child, of thought. Action, indeed, is always easy and when presented to us in its most aggravated, because most continuous form, which I take to be that of real industry, becomes simply the refuge of people who have nothing whatsoever to do. No, Ernest, don't talk about action. It

is a blind thing dependent on external influences, and moved by an impulse of whose nature it is unconscious. It is a thing incomplete in its essence, because limited by accident, and ignorant of its direction, being always at variance with its aim. Its basis is the lack of imagination. It is the last resource of those who know not how to dream. Ernest: Gilbert, you treat the world as if it were a crystal ball. You hold it in your hand, and reverse it to please a wilful fancy. You do nothing but re-write history.

Oscar Wilde Quotation



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1976. Georgetown

Covert Structures in Science Discourse and the Issue of Linguistic Intuition

(Paper given in March 1976 at the **27th Annual Georgetown University Round Table on Languages and Linguistics**, that year devoted to "Semantics: Theory & Application", The 'English for Special Purposes' Section.)

Abstract

1. One of the goals of the present paper is to point to the acute need of differentiated and sustained research into discourse typology; the results of such endeavours should meet both theoretical and applied requirements in such a way as to bypass the existing gaps between theory and application, basically deriving from deliberate disregard of semantics. There are clear-cut differences between general and special discourse, which are obvious at the level of both the linear manifestation and the semantic interpretation.

2. In addition to overt structures obviously expressed in its linear manifestation, discourse is also characterized by covert structures, basically illustrated via presuppositions. Quite in line with Heidegger, who asserts that there is no such thing as 'presuppositionless understanding', it is here advanced that **science discourse is characterized by a definitely outlined pattern of assertions, accompanied by an equally definite pattern of presuppositions**. The balance between assertion and presupposition is typologically specific in science discourse.

3. Native intuition is the L1-speaker's ability to make spontaneous linguistic judgments expressible in terms of Grammaticality, Well-formedness, and Acceptability. In the present research we will be dealing with sentences which are both grammatical and well-formed. Acceptability, however, should be further qualified, as we are here concerned with two basic kinds:

(a) acceptability of **the assertive content** of science discourse, and

(b) acceptability of **the presuppositional content** of science discourse. A few unsystematic remarks will also be made on the place of Appropriateness in science texts.

4. The fundamental contention of the present paper is that **the overall linguistic intuition of an L1-reader/writer is not sufficient** in order to detect flaws in the covert patterning of semi-special discourse.

5. Theoretical and practical implications. The frame of reference of the sentence is not at all sufficient for an adequate investigation of science discourse. Whereas sentence linguistics can satisfactorily handle assertive content, its frame of reference is far too narrow in order to handle presuppositional patterning and discourse structure. Science discourse therefore justifies independent research that may lead to theoretical results.

One of the tasks deriving from exposing the non-expert to science discourse is to expand the boundaries of his linguistic intuition. It has repeatedly been observed (but there is so far only anecdotal evidence) that the L1 non-expert is less able to detect semantic and lexical failure in L1 science discourse than the L1 science expert in Ln texts. The present problem evinces clear pragmatic parameters: it arises in the non-expert and semi-expert communicative situations. Progress in the teaching and learning of Ln science discourse depends in the last analysis on advance in the theory of discourse.



1976. Hanasaari

Only Connect...

(Paper given in 1976, at the **Third Scandinavian Conference of Linguistics**, which took place at Hanasaari, near Helsinki, in Finland, between 1 and 3 October 1976; the Proceedings, edited by Fred Karlsson were issued by the Text Linguistics Research Group of the Academy of Finland, Turku/Åbo, 1976, 404+16 pages.)

[**Acknowledgements:** I should like to avail myself of this opportunity and thank the participants in the discussion of the present paper at the Helsinki meeting—V. Sørensen (Århus), C. Kock (Copenhagen), Einar Haugen (Harvard and Uppsala), R. Leite (Oslo) and others as well as the chairman of the session H. Basbøl (Odense), whose contributions have certainly improved the present version. A verbatim transcript of the discussions has already been issued by the Discourse Analysis Project, Department of General and Theoretical Linguistics, University of Stockholm, Sweden.]

(**Epigraph by Ludwig Wittgenstein, 1938**)

> I have often compared language to a tool chest, containing a hammer, chisel, matches, nails, screws, glue. It is not a chance that these things have been put together—but there are important differences between the different tools—they are used in a family of ways—though nothing can be more different than glue and a chisel.

1.1 Outline of the problem. The present study is devoted to the discussion of the following relations—

(1) Cn { p, q }

(2) C [+s] / (n, 0) → K (0, c)

where p and q are current hypermorphemes in sequentialization. Cn is a standard or non-standard conjoiner **(fn 1)** actualized in the linear manifestation of discourse, whereas K is an abstract connector with its overt and covert matrices, as defined in Sandulescu (Texas, April 1976). The main theoretical problem under discussion is that of the possible correlation between an actualized conjoiner C—with its whole range of lexicalizations in a given natural language—on the one hand, and the complex bundle of features going into the making of Ko and Kc structures in the process of monitoring discourse in both production and perception. It is advanced that conjoiner status in discourse, particularly within a frame of reference of a consistent real-discourse model which should meet tight requirements of descriptive adequacy, is by no means identical with 'propositional connective' status in symbolic logic, or 'cojunction' status in conventional grammar, and should in no way be confused with them.

1.2 Connectedness. The itemizable category of conjoiner, as viewed in the present model of discourse, is highly dependent on the theoretical construct of connectedness, circulated in topology and algebraic linguistics (cf. Saloni et al. 1974). It is superordinated to the less satisfying notions of cohesion (Halliday & Hasan 1976), coherence (as differentiated from cohesion by H. Widdowson), and connexitivity as employed by language statisticians and quantitativists. Ongoing research into discourse structure shows that conjoiners tend to form open sets, analysable in terms of set theory, rather than closed inventories, as hypothesized by conventional (including transformational) grammars.

1.3 The symbols p and q in symbolic logic. Taking p and q to stand for atomic propositions, more complex statements can be formed by connecting them in order to obtain molecular propositions. This is done via connectives: propositional connectives in modern logic derive from the conjunctions existing in natural language, but are defined explicitly by means of truth tables, logic having originally emerged as a purely normative discipline (fundamentally connected with truth-values in effective argumentation). The exact sense of logical connectives thus rests on their truth-functional definition:

(3)

p	**C**	**q**
0	0	0

0	0	1
1	0	0
1	1	1

If C is ascribed the lexicalization 'and', then the truth table is correct, and the conjunction p & q is true provided p is true and q is true. Assuming that—

(4) p (Aristotle is Greek)
q (the table is brown)

the connection thus obtained—

(5) (p & q) (Aristotle is Greek and the table is brown)

is acceptable in logic on the strength of its truth-value function exclusively. But this, it must be pointed out, is an excessively narrow theoretical foundation to base a discourse model on. Here is what an outstanding logician has to say regarding the goals of logic:

> (CHURCH 1956 : 1) Our subject is [...] formal logic. Traditionally, formal logic is concerned with the analysis of sentences or of propositions and of proof with attention to the ***form*** in abstraction from the ***matter***.

Imposing, however, even minimal requirements of descriptive adequacy on a real-discourse model, p & q as conjoined in (5) hardly meets connectedness conditions in any possible communicative situation. The same holds good if we delete the conjoiner and/or play with tense:

(6) Aristotle was Greek, the table is brown.

This does not meet connectedness conditions for the reason that ***matter*** (i.e. the semantic interpretation)—in the sense given it by Alonso Church—becomes in a real-discourse model as important as ***form***, and perhaps, even more so. Within such a model, it is the function of the twin K matrices to fuse matter and form in a unified descriptive procedure, not only by extending conjoiner range to cover all non-standard items, but also by providing **a subtheory of discourse heads**—as sketchily outlined in Sandulescu (New York, March 1976)—to take care of matter. An overt or

covert sharing of identical or related discourse heads is a fundamental connectedness constraint, imposed on any p q sequence in order to build appropriate discourse.

(7) (Aristotle was Greek. His writing table was always brown.)

In (7), the two items ***his*** and ***was*** are to be represented as 'sustained Person' and 'sustained Tense' respectively within the overt K matrix, whereas ***writing*** is only assigned a place as a connectednes marker within the covert matrix of the same K connector on the basis of the speech-act participants' mutual factual knowledge of a certain possible world (which incidentally also accounts in part for the use of Past Tense in the latter hypermorpheme: the proper name ***Aristotle*** certainly functions as a covert tense marker). Lastly, ***always*** occupies an even more remotely covert position in the K hierarchy, fulfilling multiple functions (mainly 'diachronic' in implication) at the levels both of the given possible worlds and of a certain universe of discourse. The 'atmospheric' impact on discourse of such items is so far uninvestigated, having only been analysed impressionistically in stylistics. Worth an analysis in the above manner are also discourses such as—

(8) Aristotle was Greek. He never had a writing table and it was always brown.
(9a) Aristotle was Greek. His writing table will have been brown.
(9b) Aristotle was Greek. His gestures will have been Mediterranean.

In these oversimple examples, which come nowhere near the complexity of an actual text, the obvious methodological restrictions imposed upon the data are that we have confined our remarks to two-hypermorpheme discourse only: the precedent (i.e. the first hypermorpheme) was kept constant, and only one central discourse head (viz. Aristotle) was resorted to.

1.4 Connectives as the 'glue' of language. Turning again to fairly elementary symbolic logic for a statement of phenomena from the formal viewpoint, several types of propositional connectives can clearly be distinguished. Generally speaking, logical connectors are symbols which may be used together with one or more propositions to form or produce a new proposition. They in fact play such an outstandingly important role in the language, be it natural or formal, that it is next to inconceivable to have them eliminated from it. But connectors not only 'glue' propositions together, they 'control' propositions. It is on the basis of this control rather than 'conjoining' function

that there are three distinct types of truth-functional connectives **TFC** in mathematical logic:

(a) **unary**, or singulary, or one-place TFC's, controlling one single proposition;

(b) **binary**, or two-place TFC's, controlling two propositions (the ***precedent*** and the ***subsequent*** in the terminology of our discourse model),

and finally,

(c) **n-ary**, or n-place TFC's, controlling more than two propositions.

In point of fact, there is no upper limit to their conjoining capabilities, as TFC's can logically be defined for any number of constituent propositions. However, natural language lexicalizations of propositional connectives only evince a two-place pattern of the standard formula—

Cn {p , q}.

In consequence, conventional linguistics and all descriptive grammars deal with the middle type only in the above sub-categorization of logical connectives—that of the standard conjunction.

The problem we are faced with at this stage is expressible in terms of what should be given conjoiner status in a real-discourse model in order to meet connectedness constraints which are at least remotely analogous with those in symbolic logic.

1.5 Objections to connective sub-categorization in logic. Contemplating the threefold conjoiner typology, however, the important remark must be made that modern symbolic logic has concentrated to such an overwhelming extent on two-place connectives—conjunction, disjunction, implication, and equivalence—primarily because they represent the outstandingly common type of connective that is lexicalized in natural language. The three-fold classification also points to the equally important fact that there can be no question of a 'zero-place connective' even remotely analogous to Montague's zero-place operation symbol (cf. 1974 : 99) **(fn 3)**. And this simply because, in Wittgenstein's terms, a connective should be 'the glue of language', fundamentally presupposing at least one item to be organically tagged to at least one

other item via 'this very thing', which may be variously called ***connective*** in mathematical logic, ***conjunction*** in conventional linguistics, and ***(standard vs. non-standard) conjoiner*** in our own model of discourse structure. But if a zero-place ***'connecter'***—to use Lord Quirk's (1972 : 661ff) new-fangled spelling—is a misnomer in all these disciplines, so is a one-place connecter in at least some of them. (Church 1956 : 36) The chief singulary sentence connective we shall need is one for negation. In this role we shall use, in formalized languages, the single symbol ~, which when prefixed to a sentence, forms a new sentence that is the negation of the first one. The associated function of this connective is the function from truth-values to truth-values whose value for the argument ***falsehood*** is ***truth***, and whose value for the argument ***truth*** is ***falsehood***.

It is very hard to conceive of connectedness constraints on discourse structure allowing for a 'one-place' conjoiner, analogous to negation, the singulary connective of symbolic logic. This is indeed a major point of divergence as regards connecter theory between the two disciplines. Negation does not in any way have a connective function, worth that name, in discourse. No possible interpretation of negation in discourse can assign it a higher status as a connectedness marker, be it syntactic, semantic, or pragmatic, than that which may be accidentally assumed by any other non-conjoiner **(fn 4)**.

1.6 More than two place connectives. In a very recent and interesting paper, Gazdar & Pullum (1976) point to the fact that natural languages lexicalize only an extremely small range of TFC's. And the authors go on to demonstrate by using truth-value tables and other arguments that "the number of logically definable TFC's turns out to be literally greater than infinity". The real-discourse model that we are operating in requires that TF constraints on conjoiners be dropped are replaced by the pragmatics-oriented category of connectedness constraints, which take into account not only form but also matter (cf. the subtheory of discourse heads) and the attitudes of speech-act participants. Within this entirely different frame of reference, it still remains a very interesting suggestion to hypothesize the existence of -ary conjoiners (cf. Section 3.5 of the present paper).

2.1 The zero conjoiner. There is then the issue, by no means clear in interpreting discourse structure, of the zero conjoiner, which is quite different from the non-existent zero-place connective mentioned above. Such a conjoiner either does not emerge very often in the linear manifestation of discourse (the restricted approach), or it does emerge, literally, all the time (the comprehensive approach). Adopting the

narrow approach, we may say that whenever such a conjoiner does emerge, it disturbs both intonation patterns and conventional punctuation (i.e. graphemic) systems; here it is, provisionally illustrated by two sets of data, one in Swedish, the other one in Rumanian:

(10) Man ska inte bara bo—man ska trivas. (current Stockholm housing advert)
(11) Nu mergem acasă, (ci) mergem la cinema.

In the Rumanian example, the insertion is possible of an optional conjoiner ***ci***, but the fairly low frequency of occurrence of this standard conjoiner in most discourse types makes its reinsertion rather improbable. Something somewhat similar may perhaps be said of the Swedish example (cf. ***utan***, perhaps correlated with ***också***). But in English sentences of the type—

(12) We are not going home, we are going to the cinema.

no standard conjoinder is conceivably insertable; in writing, the linear manifestation takes the shape of two hypermorphemes not separated by period, but united by a comma. Even the semi-colon would be inappropriate.

2.2 Insertability vs. deletability. In Sandulescu (Oslo, April 1975) the complicated issue was discussed of the following principles: (a) the conjoiner insertability principle, as suggested by Katz & Fodor in 1963, and by virtue of which any text could become a sentence by infinite and indefinite ***and*** insertion; this is nowadays widely rejected by most linguists. There is at the other end of the scale, (b) the conjoiner deletability principle, suggested for the first time by Sandulescu (in the same paper) as a primary means of discourse formation, and as a cardinal communicative operation in monitoring discourse in reception. Hypothesizing such a principle also throws new light on the theory of paraphrase. The question is, particularly in the light of the conjoiner deletability principle, whether all instances of deleted conjoiner should or should not be regarded as instantiations of the 'zero conjoiner'. In this way, however, any two sentences separated by period, but united by a common semantic interpretation should indeed be connected by means of a zero conjoiner! And to facilitate it, a symbolic-logic approach even discards, as we have seen earlier in the present study, the requirement of an inter-related or mutually connected semantic interpretation, ascribing all truth-value to the conjunction p & q, provided the two hypermorphemes are true, when taken separately. As the issue of the zero conjoiner

is an extremely complex one, the solution of which depends on the completion in greater detail of other areas of the discourse model that we have adopted, we would like to leave the question open for further discussion, restricting, however, the use of the zero conjoiner to the instances in which the language under investigation does have a fully lexicalized standard item, which is optionally insertable in order to fulfil a standard-conjoiner function in the linear manifestation of the discourse, as illustrated by the Swedish and Rumanian examples // DATA // in (10) and (11).

2.3 Deep structure status? At a time when certain generativists (cf. Chomsky 1976, **Reflections on Language**, Fontana, as reviewed by J. Searle, TLS, September 1976) seem to be dropping the notion of deep structure in favour of a modified version of surface structure, it would be preposterous on our part to postulate and hypothesize abstract levels and even more abstract levels of investigation, the 'existence' may be disproved within the short span of only a few years. There has been far too little investigation of discourse to justify positing the issues of both 'deep structure' and 'generation' of discourse. However, hypothesizing a zero conjoiner remains an interesting suggestion, particularly for at least some of the cases that D. Wilson (1975 : 33, 78, 84) presents as single sentences, but which Sandulescu (Åbo/ Turku, November 1975) interprets as discourse, such as—

(13) I just knew I'd win—I can't see how I lost.

(14a) Mary didn't clean the room: it wasn't dirty.

(14b) I didn't clean the bathroom: I cleaned the kitchen.

(15) Harry didn't criticize Bill for being the last man out of the room: he criticized Charley.

The postulation of a zero conjoiner is, we repeat, fraught with dangers, and it is only a correlation between the linear manifestation of discourse and its corresponding semantic interpretation (far more exact and accurate than any researcher can produce at the moment) that can give an answer to this question. We wish to suggest by way of conclusion that it is only by providing a rigorous binary (overt vs. covert) structuring of K matrices that many of the current impressionistic conclusions about discourse can become scientific data.

3.1 Role of C in text structure. In order to ensure an empirical basis for the discussion of standard and non-standard conjoiners, let us start from a text which belongs to a discourse type by definition cancelling the pragmatic boundaries of written vs. spoken transmission. Any text can be broken down into (a) an ordered set of hypermorphemes—

(16) p q r ... x y z ,

defined as minimal clauses functioning as independent communicative entities in discourse, particularly given their propositional content, and (b) a set of conjoiners C of various types and categories. One important step in providing an explicit description of a text to contribute to its assignation to a discourse type is reducing it to a structure which can in logical terms be described as—

(17) ((p —- q) & (q —- r)) —- (p —- r)).

Assuming that all conjoiners are C in the linear manifestation, any text is of the shape—

(18) p C q C r C ... x C y C z ,

where **p is the initial hypermorpheme of any discourse, and z is the final hypermorpheme of the same discourse, no matter whether the given discourse is in pragmatic or syntactic terms defined as a partial sequence pQ or as a total sequence tQ**; such a notation makes unnecessary and redundant the use of any end-of-discourse marker. It may happen, however, that no lexicalized conjoiner C occurs in the linear manifestation of discourse and the text may take the hypothetical shape—

(19) p q r ... x y z,

but the discourse model presupposes the existence of relations of connectedness between the hypermorphemes sequentialized in the linear manifestation of discourse.

3.2 Three fundamental types of hypermorpheme sequentialization. Such connectedness relations can be explicitly described within the matrices and with the formal devices of K, which concurrently functions as an overall symbolic marker of

propositional connectedness. One obtains in this way three possible sequences of hypermorphemes in discourse:

(20) (**alpha**) (p C q C r ... C x C y C z)

(21) (**beta**) (p K q K r ... K x K y k z)

The (beta) formula shows that the relations between hypermorphemes are abstract relations of connectedness, not realized in the linear manifestation of the discourse by means of any lexicalized conjoiner. Finally, a formula of the type—

(22) (**gamma**) { x ; p ; y ; q ; z ; r }

would simply denote a set of hypermorphemes with no relations of connectedness whatever established between them. Certain researchers may label a sequence of hypermorphemes patterned on the last formula a '**non-text**', or even a '**pseudo-text**'! But as any 'pseudo-text' may become a text provided certain pragmatic constraints are in force (**fn 5!**), we prefer to call it '**an unordered set of hypermorphemes**'. Such an unordered set of hypermorphemes may accidentally meet appropriateness constraints: putting together two sentences which are seemingly unrelated, a new semantic relation may emerge from discourse head association.

(23a) I met Enkvist on the corridor a few minutes ago. There's going to be majority rule in Rhodesia in two years' time.

The 'accidental' connectedness relationship between the two discourse heads—

(23b) Enkvist vs. Rhodesia

conveys the presupposed meaning in the underlying structure that—

(23c) It was Enkvist who communicated to me that this was so.

The unordered nature of (22) is marked by the bracketing { } rather than in the conjoining system alone, as there is more to connectedness than just conjoining. This means that neither C nor K are insertable between the hypermorphemes, though relations of connectedness may accidentally occur.

The text to be outlined below is, like any real text, a complex combination of an (alpha) with a (beta) formula of discourse structure: it is submitted to the fundamental formal constraint of discourse in accordance with which **the emergence of a C in the linear manifestation of discourse is optional, whereas the existence of a K is compulsory between all hypermorphemes, be they adjacent or remote**.

3.3 A partial sequence. As we are less interested at the moment in the semantic substance of the hypermorphemes, let us simply replace them by bracketed lower-case Latin letters (for reasons of convenience, we start the listing with a; and the occurrence of z is no longer an end-of-discourse marker, as was the case in the hypothetical formalization). We thus obtain the following text structure, itemizing only the lexemes outside hypermorphemes. **(A)** and **(B)** mark participant boundaries:

(24)
(A) ((but) (my dear fellow) (excuse me for interrupting you) (you seem to be X-ing (a))) # (for) (after all) (even you must admit (that (b) (than (c)))) #
(B) (b′) (than (c′)) # (d) # (e) # (f) than (g)) # (h) # (i) # (j) (k(l(that m)))) # (it is (n) (or (o)) # (p(q) # (indeed (r) (and when (s)))) (because (t) (which (u(v(who w)))))) # (no) (Avoc)) (x) # (y(and z(of whose (aa))))) # (bb(because (cc(and(dd(ee)))))) # (ff) # (gg(who(hh (how(ii)))))
(A) (Bvoc)(jj(as if(kk))) # (ll(and(mm))) # (nn(but(oo))) #

(The actual semantic interpretation of this whole text is left to the reader's literary imagination. Have a try!)

3.4 Discussion. This way of representing a text, any text, singles out three major sets of conjoiners. First, there is the comprehensive group of standard conjoiners—the 'conjunctions' of conventional linguistics. They materialize two distinct types of grammatical relations—co-ordination vs. subordination. It is only the 'logical connecters' (***and, but, or, for***; cf. Lord Quirk et al. 1972 : 661f) that approximate the function of propositional connectives in symbolic logic. The subordinators (***who, when, how, that, than***), the next set of conjoiners, pose major problems in the methodological process of disengaging hypermorphemes. Disengagement procedures have yet to be studied in discourse. Clearly, it is the subordinators that distinguish between discourse types: written discourse evinces highly elaborate subordinator patterns, this being one of the formal features on the basis of which it can be defined. Finally, it is the subordinators that are to an overwhelming extent

compulsory in the linearization of a given discourse; their co-ordinative counterparts are to a large extent deletable from the linearization without affecting sentential well-formedness, and quite often, without substantially modifying the overall semantic interpretation of discourse. Subordinators should be given great attention as part of a discourse theory of paraphrase.

Non-standard conjoiners—the next most important set—are not generally assigned conjoiner status in conventional linguistics. Traditional, structural, and even transformational grammars have treated them as adverbs or particles deprived of any considerable syntactic significance. They were never viewed as conjunctions for they are 'parenthetical' to various degrees, and it is the semantic interpretation alone that ascribes them a connecter function. More recently (Halliday & Hasan 1976 : 267ff) has led to the study of **continuatives** (***after all, of course*** etc). The set of **attitudinal disjuncts** (***indeed, possibly, apparently, actually***; cf. Lord Quirk et al 1972 : 511ff) is a controversial subcategorization balancing repudiated against sustained information in discourse structure. **Response markers** ***yes*** and ***no*** presuppose two distinct linguistic phenomena: first, the existence of a foregoing question in relation to which they function both as answer and as '**reduplicative dummy**'; secondly, the existence of a participant boundary between the question and the answer (**Footnote 7**). **Parentheticals** are a subset of non-standard conjoiners with a difference: they are syntactically even more disengaged than the continuatives or the response markers for the very fact that they are often linearized at the level of the sentence, clause or phrase. This essentially marginal syntactic character has made them be closely associated with **performance phenomena** and dismissed as such. But parentheticals fulfil a definite connecter function: all discourse types (cf. partial sequence pQ above) evince the use of one type of parentheticals or another. They clearly affect discourse structure in a most immediate way, and considerably modify semantic interpretation over longer stretches of linearized language. It is only a discourse model that can begin to accommodate parentheticals; their occurrence in discourse is culture-specific.

To conclude this section, here is a conjoiner chart for the standard and non-standard conjoiners so far discussed:

1.0 Standard Conjoiners:

1.1 Co-ordinative (logical connecters): and, but, or; for.
1.2 Subordinative: that, than, how, who, of whose, when, which, as if.

2.0 Non-standard Conjoiners:

2.1 Continuatives: after all, of course.
2.2 Attitudinal Disjuncts: indeed, possibly.
2.3 Response Markers: yes, no.

3.0 Parentheticals:

3.1 (sentence) excuse me for interrupting you
3.2 (clause) you must admit
3.3 (phrase) my dear fellow, in my opinion
3.4 (word) NAME (in vocative function)
3.5 (morpheme) well.

These were the subsets of conjoiners to be almost exclusively derived from the very short text in 3.3. More extensive text is sure to reveal more complex conjoining systems. Some are language-specific, thus correlating with differentials, others have communicative value correlating with universals. Whichever the case is, all such subsets require unified treatment in discourse.

3.5 n-ary conjoiners. A case should perhaps be made that at least some conjoiners function on an n-place basis, i.e. more-than-two-place-structure:

(25) C **[-s]** {p q r s ... }

Certain parentheticals may be particularly well suited for this function. Such an n-place non-standard discourse conjoiner is analogous in function with the logical connective—

(26) It is not the case that {p q r s}

However, given their clearly nominal character, a discussion of n-place conjoiners in discourse goes far beyond the bounds of the present paper; we have therefore merely limited ourselves to stating the issue.

4.0 Conclusions

4.1 A text, any text, is made up of **two distinct configurations** superimposed one upon the other: a configuration of sequentially ordered hypermorphemes pqrs...xyz, coupled with a configuration of conjoiners Cn's, insertable between the hypermorphemes on the basis of optional constraints. This twin configuration gives the essence of **textuality**.

4.2 The set of C's plays a cardinal role in structuring discourse, quite analogical—though by no means identical—with that played by propositional connectives in modern logic. The fundamental distinction lies in the fact that lexicalizations of C form two distinct subsets, subjected to different internal constraints.

4.3 In addition to closed subsets of **standard conjoiners C[+s]**, also belonging to the set C is the open subset of **non-standard conjoiners C[-s]**, including parentheticals.

4.4 Non-standard conjoiners, as defined in the body of the paper, can only emerge from a consistent correlation of the semantic interpretation of the discourse with the corresponding linear manifestation, as mirrored in K structures at various levels of operationalization in the hierarchy.

4.5 Hypothesizing the existence of a zero conjoiner in the discourse model to be adopted requires further investigation. Such a zero element, to be duly interpreted formally only within the Kc matrix could emerge in the linear manifestation as either **C[+s]** or as **C[-s]**, depending on the alternative realizations to be adopted in the process of monitoring discourse in production. This issue is closely related to a pragmatic theory of paraphrase at hypermorpheme level.

4.6 How to operationalize **C[-s]** in a formal model of discourse without reducing it to the status of a mere logical connective, ranging over more than two hypermorphemes, could be considered n-place connecters, analysable in terms of Montague's concept of satisfaction.

Notes

(1) In the talk given at the Helsinki Meeting of Linguists, **C[+s]** and **C[-s]**, were called 'conventional' and 'non-conventional' respectively, but labels have since been

changed largely on account of a remark by Einar Haugen during the discussions, pertaining to conventionality in language. We wish to express gratitude for insistence on terminological accuracy.

(2) For a plethora of similar examples, see any elementary textbook, e.g. Suppes 1964, First Course in Mathematical Logic; Suppes 1957, Introduction to Logic; Stebbing, passim, etc. Furthermore, any descriptive analysis of any partial sequence p q is impeded by the very fact that it is 'partial'. This is not at all a question of disambiguation by context, but rather an issue of overall discourse structure, which is an altogether different matter.

(3) Montague's (1974 : 99) zero-place operator symbol ***The American President*** is, in the last analysis, a one-place symbol. This culture-specific place assignment to the expression is perhaps most obvious in British English or in 'Swedish English' (The American President Gerald Ford, den amerikanske presidenten Jimmy Carter) than it is in a purely 'American' 'context of use'. One should perhaps mention that Carter had difficulty during the 1976 TV-debates in finding the right term of address in spoken discourse: he rejected both ***Mr President*** and ***Mr Ford*** and was only left with the rather questionable vocative ***President Ford***. (A similar problem surfaced years later in the TV-debates in French between President Mitterand and Mayor of Paris Jacques Chirac: it surfaced quite dramatically in the actual quite spontaneous exchanges in spoken discourse...) In other words, within the given discourse structure ***president*** clearly became a one-place symbol.

(4) Negation does have a disturbing effect on connectedness in data of the type— I have no brown table but it is square, or the exchange (A) What time is it? (B) Not yet which still, in very specific situations, may make very appropriate discourse. These and other data may point to the fact that negation could function as a very strong 'disconnecter'. It may increase connectedness in dialogue but that in itself does not justify an analogy with logic.

(5) Nobody in quest of a novel to read would take up a telephone directory, though the latter is subjected to a clear set of textual constraints too, which make it either appropriate or inappropriate according to the year of publication.

A telephone directory is a discourse ranging over a set of individuals existing in a given possible world, analogous to a novel. All propositions, however, are invariably of the same shape: an implied existential operator, accompanied by the

deictic markers of coded location and coded tele-channel. This is adducible to rigorous, but trivial, formalization. Such a description does not of course cover 'secret' telephone numbers, which require additional constraints related to the interpretation of silence.

(6) This particular partial sequence has been selected from **Oscar Wilde**, 'The Critic as Artist', in: Complete Works of Oscar Wilde, edited, with an Introduction by Vyvyan Holland, Collins, London and Glasgow, 1948/1969, pages 1022-1023:

> Ernest: But, my dear fellow—excuse me for interrupting you—you seem to me to be allowing your passion for criticism to lead you a great deal too far. For, after all, even you must admit that it is more difficult to do a thing than to talk about it.
>
> Gilbert: More difficult to do a thing than to talk about it? Not at all. That is a gross popular error. It is very much more difficult to talk about a thing than to do it. In the sphere of actual life that is of course obvious. Anybody can make history. Only a great man can write it. There is no mode of action, no form of emotion, that we do not share with the lower animals. It is only by language that we rise above them, or above each other—by language, which is the parent, and not the child, of thought. Action, indeed, is always easy and when presented to us in its most aggravated, because most continuous form, which I take to be that of real industry, becomes simply the refuge of people who have nothing whatsoever to do. No, Ernest, don't talk about action. It is a blind thing dependent on external influences, and moved by an impulse of whose nature it is unconscious. It is a thing incomplete in its essence, because limited by accident, and ignorant of its direction, being always at variance with its aim. Its basis is the lack of imagination. It is the last resource of those who know not how to dream.
>
> Ernest: Gilbert, you treat the world as if it were a crystal ball. You hold it in your hand, and reverse it to please a wilful fancy. You do nothing but re-write history.

(7) It is true that in the case of rhetorical questions there is no participant boundary; this very phenomenon is marked by the fact that certain languages possess specific or quasi-specific lexicalized response markers, which are, among others, used in

conjunction with such questions: *jo* in Swedish, *si* in French, *ba da* in Rumanian, depending, of course, on the structure of the question itself.

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Ernest: But, my dear fellow—excuse me for interrupting you—you seem to me to be allowing your passion for criticism to lead you a great deal too far. For, after all, even you must admit that it is more difficult to do a thing than to talk about it.

Gilbert: More difficult to do a thing than to talk about it? Not at all. That is a gross popular error. It is very much more difficult to talk about a thing than to do it. In the sphere of actual life that is of course obvious. Anybody can make history. Only a great man can write it. There is no mode of action, no form of emotion, that we do not share with the lower animals. It is only by language that we rise above them, or above each other—by language, which is the parent, and not the child, of thought. Action, indeed, is always easy and when presented to us in its most aggravated, because most continuous form, which I take to be that of real industry, becomes simply the refuge of people who have nothing whatsoever to do. No, Ernest, don't talk about action. It is a blind thing dependent on external influences, and moved by an impulse of whose nature it is unconscious. It is a thing incomplete in its essence, because limited by accident, and ignorant of its direction, being always at variance with its aim. Its basis is the lack of imagination. It is the last resource of those who know not how to dream.

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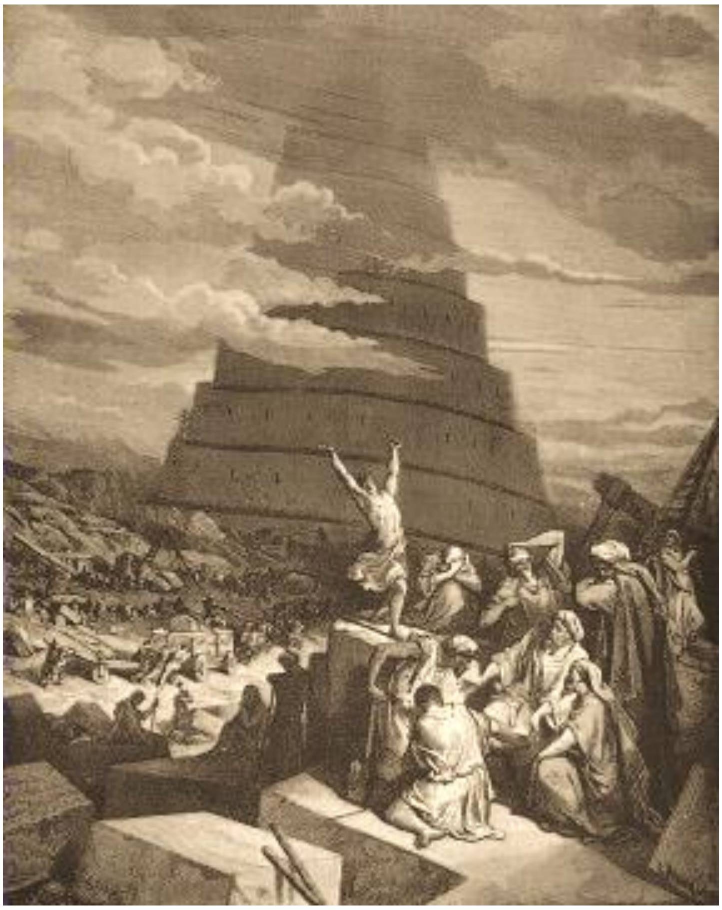
Oscar Wilde Quotation

(24)

(A) ((but) (my dear fellow) (excuse me for interrupting you) (you seem to be X-ing (a))) # (for) (after all) (even you must admit (that (b) (than (c)))) #

(B) (b′) (than (c′)) # (d) # (e) # (f) than (g)) # (h) # (i) # (j) (k(l(that m)))) # (it is (n) (or (o)) # (p(q) # (indeed (r) (and when (s)))) (because (t) (which (u(v(who w)))))) # (no) (Avoc)) (x) # (y(and z(of whose (aa))))) # (bb(because (cc(and(dd(ee)))))) # (ff) # (gg(who(hh (how(ii)))))

(A) (Bvoc)(jj(as if(kk))) # (ll(and(mm))) # (nn(but(oo))) #



1976
Book Review

M.A.K. **Halliday** and Ruqaiya **Hasan** 1976,
Cohesion in English,
Longman, London, 374 pp. paperback £5.

(This book review was published in 1976 in the October issue of *Working Papers in Discourse Analysis*, Department of General Linguistics, University of Stockholm, as part of research conducted within the Discourse Analysis Project.)

1. ***Cohesion is English*** can best be described as a bunch of compromises, which intelligently avoid the pitfalls of contradictions: it is a book putting across major points of theoretical and general linguistics through exclusive reference to the English language, in a way remotely reminiscent of what Chomsky and Halle were attempting to do in ***The Sound Pattern of English***,—a book which more or less started the newfangled modern tradition of making valuable linguistic generalizations via one language only.

The other compromise is that it presents a new approach to a new issue, but at the same time aiming at a public which is meant to be as wide as possible (as Longman is very much in the habit of doing). In other words, the book is meant to be of use to the general linguist, to the applied linguist, to the average teacher of English as a first language, second language, or foreign language as well as to anybody dabbling in language theory at both amateur and professional levels. Accessibility is further increased by easily contextualizable discourse data largely extracted from one single book (Alice!); the authors themselves comment on their selection of data as follows:

> (page 300) Consider the examples that have been cited throughout this book. The vast majority of them have been drawn from either *Alice in Wonderland* or made up. Why? This is the only way to ensure that attention will be focused on the point at issue: either to use a text that is so familiar that the reader will not pause over its interpretation, or to construct examples that are so artificial that they avoid the problem.

The last part of the last sentence may well be, at least in one of its possible interpretations, a well-disguised but devastating criticism of the way most adepts of

a certain type of grammar are obtaining their data (for a discussion of the nature of linguistic data, cf. also Sandulescu Stuttgart/August 1975).

The book as a whole is placed within the clear theoretical tradition and frame of reference of Halliday 1961 on the categories of grammar, a programmatic article which, in point of detail, still remains imperfectly understood by linguists in many parts of Europe. It further builds on Halliday 1967 on transitivity and theme, and most certainly is an expansion and follow-up of Hasan 1968 on cohesion in spoken and written English; finally, it is, to an indefinite extent, the outcome of mild co-operation with sociologists like Basil Bernstein (cf. footnote on page 288 on Hasan, forthcoming, about language in the imaginative context).

2. Halliday & Hasan 1976 is divided into eight chapters, primarily based on the meaning of different kinds of cohesion. As part of an introduction devoted to the important operation of providing correlational definitions of fundamental concepts, mainly by relating text to texture (cf. Ransome 1940, and the New Criticism), and text to discourse—"the discourse comes to life as text" (page 299), (very 'scholarly & scientific' formulation, that!)—, the authors attempt to define cohesion on the basis of grammatical structure and linguistic system. (It is interesting to note here that the authors completely disregard the work of Widdowson, also originally from Edinburgh, who clearly distinguishes between cohesion and coherence.) To put it briefly, the authors advance the well-known view that cohesion is essentially a function of a set of categories, but what is new, interesting and perhaps important for the further advancement of theoretical linguistics is the 'componential' analysis of the notion. Thus, in the subsequent chapters, the authors discuss cohesion under five headings of reference (Chapter 2), substitution (Chapter 3), ellipsis (Chapter 4), conjunction (Chapter 5), and finally lexical cohesion (Chapter 6). The remaining two chapters function as separate conclusions to the book: Chapter 7, on the meaning of cohesion, takes up the points already made towards a definition in the Introduction, and processes them again in the light of the discussion provided by the five intervening chapters; the emphasis is again on texture (pages 295 ff), and the correlation with discourse (pages 326 ff). The analysis of cohesion—the last chapter of the book, and the most didactic and down-to-earth of all—is written in clear textbook form; it provides rules of the thumb, called General Principles, and a very transparent coding scheme (where, unfortunately, overtaxonomization emerges at its worst) followed by seven sample texts. In the description of these texts, the theoretical construct of presupposed item clearly plays an overwhelmingly significant role in building up text cohesion.

The bibliography at the end of the book is useful, but there are suspiciously too many relevant items which are not quoted, and many of the entries are only of doubtful relevance to the topic; but this is quite another matter equally related to the philosophy of science, the sociology of linguists, and Kuhn's "who's quoting who, and when". From among the entries that are either **too conventional, too 'elementary', or downright irrelevant** to a modern analysis of discourse, we mention Curme 1931, Fries 1940, Harris 1963, Jespersen 1909-1949, Kruisinga 1931, Strang 1968, Ullmann 1964, Zandvoort 3rd ed. 1965, etc.

3. The great merit of Halliday & Hasan 1976 is that it provides the first 350-page full-length discussion of a discourse phenomenon—that of cohesion—which has so far (with the possible exceptions of Hasan 1968 and Gutowski 1974) received only very restricted attention (and that only in articles ten or twenty pages long).

As a general notion, **text** is the basic semantic unit of linguistic interaction; the type of presupposition which provides texture in text (cf. also Sandulescu Åbo/Turku November 1975), and which the authors are calling cohesion, can extend over very long sequences of language, achieving cohesive ties across very long stretches of text. Texts are, paradoxically, relatively free from constraints of time and depend much more on contextual relevance. Unfortunately, the authors occasionally resort to vague, fuzzy, and circular statements characterizing much semiological research in France:

> (page 299) What creates text is the TEXTUAL, or text-forming, component of the linguistic system, of which cohesion is one part.

4. From one point of view, reference is either **endophoric** or **exophoric**, with the endophoric variety further subdivided into **anaphoric** and **cataphoric**. From another point of view, there are three types of reference—personal (through the category of person), demonstrative (on a scale of proximity, e.g. this 'near me', that 'not near me', yon 'not near either of us' (page 305)), and, finally, comparative reference, by means of identity or similarity. This taxonomy leads to the treatment of most pronouns under reference, and not under substitution or ellipsis. Certain functions of it are discussed in terms of either extended endophoric reference (page 52), or generalized exophoric reference, as is the case with it is snowing, which is treated as a universal meteorological operator, essentially reflecting institutionalized exophora. Definite article *the* is, too traditionally perhaps, part of demonstrative reference. An interesting type of reference, however, which may be considered as one of the major new and important contributions of the book, is the treatment of the grammatical

category of comparison, which is a great source of trouble in all text processing, within a frame of identical vs. similar reference. It is at this point perhaps that Halliday's distinction between discourse structure and information structure becomes most obvious. Both general and particular comparison (e.g. (2.75a) (I was expecting someone different.) vs. (2.83) (We are demanding higher living standards.) provide an intelligent blending of a new approach with a highly traditional one, which turns the issue into an item of immediate and great interest to many, but of doubtful theoretical permanence.

5. Passing on to **substitution**, and invariably operating on the surface level only (Halliday & Hasan never come anywhere near a deep structure or a consistently viewed semantic interpretation), the important point is made that whereas reference operates exclusively on the semantic level, substitution (including ellipsis) operates on the grammatical level alone. Reference is basically interpreted as a non-verbal relation (though including most pronominal systems!), whereas substitution is viewed as a purely verbal relation, essentially confined to the text. 'Exophoric substitution is fairly rare' (page 90). There are three types of substitution—**nominal, verbal**, and **clausal** (one, ones, same; do; so, not). But there is a borderline where substitution shades into lexical cohesion, involving the use of general nouns. In discussing substitution, the authors bring into the focus of attention the important theoretical construct of **repudiation**, or **repudiated information**:

> (page 93) In any anaphoric text, something is carried over from a previous instance. What is carried over may be the whole of what there was, or it may be only a part of it; and if it is only a part of it, then the remainder, that which is not carried over, has to be **repudiated**.

As has already been pointed out, the book excels in the simplicity and clarity with which difficult fundamental concepts are explained. Illustrating the above definition, we get

(e.g. (3.10) (We have no coal fires; only wood ones.))
where **fires** is carried over anaphorically, but **coal** is repudiated. No research to date has managed to list all the far reaching consequences of repudiation in monitoring discourse in the two distinct situations of reception and production.

6. Discussing substitution, Halliday deviates from language description as provided by, say, modern symbolic logic in an interesting way: **not** is a clausal substitute, not a unary propositional connective (at least in one of its functions). This is again an important statement, as unary logical connectives have, in our opinion, an extremely precarious linguistic status in their capacity of 'connectives'. And it is quite refreshing to see Halliday going against all trends in modern symbolic logic simply in order to achieve perfect adequacy of linguistic description. A typical illustration is

((3.100) (—Has everyone gone home? —I hope not.))

In such examples, the authors seem to be acutely aware of the category of participant boundary (as discussed in Sandulescu, Oslo/April 1975), always graphemically representing it by a dash, though never feeling the need of substantiating it theoretically to any extent. Now and then, one comes across vague and insufficiently accurate definitions; here is one of them:

> (page 133) The word not can be interpreted as the 'portmanteau' realization of the substitute and negative polarity.

(Any Barbara Hall-Partee would consider such a formulation as pertaining to the Age of Edward Lear during his days in San Remo...) But the main question is: does it cover the whole domain of **not**, as a definition?

Concluding the chapter on substitution, the authors distinguish three types or contexts of clausal substitution: report, condition, and modality. But the final impression, particularly at this point, is that of an artificial attempt at incorporating all systemic data in an exhaustive way into a discourse model. It is perhaps in this section that Halliday's confusion between language and discourse reaches its highest point, and grammar is thus assigned far more onus, or load, than it can ever carry. The consideration of discourse as a completely separate level of investigation is not given a single chance.

7. **Ellipsis** is closely related to substitution in that it is one particular case of it— "ellipsis is simply 'substitution by zero' " (page 142). This treatment of ellipsis, very much along the traditional-conventional lines, is highly favoured by an exclusively surface approach to discourse phenomena, with all the disadvantages deriving from it as in, e.g.

((4:2) (Joan brought some carnations, and Catherine some sweet peas.))

and

((4:3) (Would you like to hear another verse? I know twelve more.))

There are instances of nominal ellipsis as is the case with ellipsis within the nominal group (never ever called 'Noun Phrase'!) or even presupposition of nominal elements; there is also verbal ellipsis, i.e. ellipsis within the verbal group, and lexical ellipsis, as in—

((4:57) (It may or it may not.))

A very interesting type is that of operator ellipsis, e.g.

((4:64) (Some were laughing and others crying.)

or even better—

((4:67) (—What have you been doing? —Being chased by a bull.))

Presupposition of verbal group systems is discussed in terms of **(1) Polarity, (2) Finiteness and Modality, (3) Voice, (4) Tense**, where the attempt is again obvious to include **the whole of grammar** into an allegedly comprehensive and consistent discourse model.

Somewhat similar taxonomies are then being applied to clausal ellipsis, which may be **modal** and **propositional**. An interesting discussion is provided by ellipsis in question-and-answer sequences (pages 206 ff), and indirect responses (pages 212 ff). But it is indeed surprising that modern research into pragmatics as well as recent ethnomethodology-based studies of conversation and dialogue find no place in this book (apart from a passing mention on page 327). Lack of emphasis on genuinely substantiated pragmatics (sic!) factors, and a somewhat slipshod treatment of the issue of semantic interpretation, simply under 'meaning', give a more than traditional touch, and a purely 'amateur' imprint to what is in the last analysis just another set of taxonomies (in a situation where more 'originality of theory' was being expected...). But the book is indeed in the mainstream of the so very British 'teach the teachers of English-as-a-world-language' attitude (rather than furthering the debate on theory).

8. One whole chapter is entirely devoted to the highly important question of conjunction in discourse. The positive point about it is that the authors discard both the 'traditional-conventional' and the 'symbolic-logic' approach to conjoining, and discuss the issue solely from the point of view of adequacy of linguistic description. (The critique of this chapter is made on the basis of Sandulescu, Helsinki / October 1976, where the matter was discussed in far greater detail.) Without specifying it, the authors distinguish clearly between conventional and non-conventional conjoiners, and attempt to assign conjoiner status to a restricted range of non-conventional items, such as **next**, **actually**, **therefore**, **besides**, **in addition** etc (page 231).

The authors admit that the issue of conjoining is somewhat blurred—

> (page 232) by the indeterminacy, or perhaps flexibility, of our punctuation system [;] the sentence itself is a very indeterminate category.

After making the important, but highly controversial, point that "cohesion is a relation between sentences, not a relation within the sentence", the authors go on to state that—

> (page 233) a new sentence starts whenever thee is no structural (sic!) connection with what has gone before ... [and] ... a conjunction occurs in first position and has the whole sentence as its domain.

But the actual correlation between hypermorphemes and conventional or non-conventional conjoiner is left unanalysed. It is simply not true that—

> (page 238) the conjunctive relations are not logical but textual.

It is in fact much more correct to formulate it as a Principle and, expanding their domain, say that

> conjunctive relations are not **ONLY** logical but **ALSO** textual.

Monitoring discourse, or as Halliday & Hasan are putting it "the time sequence in the speaker's organization of his discourse" (page 239) is a complex process, which has only been partly investigated by various disciplines such as psychology, communication theory, interactional analysis, and symbolic (or formal) logic. By way of digression it must be said that we tend to forget that **the syllogism was the first**

type of discourse ever to be investigated properly (in point of Information Structure), and that happened as early as Aristotle. Well then, these widely disparate approaches have never been integrated into a unified and unitary model. It is this ambitious task that discourse research is undertaking in several countries at the present moment. But the authors of the book under review fall short of that goal. The table of conjunctive relations on pages 242-243 is just another traditional taxonomy, enlarged and modernized it is true, but still evincing all the pitfalls of overtaxonomization. After all, and to put it crudely, is there much point in updating Kruisinga, and Zandvoort, and Jespersen?

9. In discussing temporal relations (page 261), there are rudimentary attempts at providing a Feature Analysis, but how can one possibly ever distinguish between structural relations and cohesive relations (page 264) in such a dogmatic way? 'Continuatives' is an interesting category, though a 'ragbag' one, and the cohesive function of intonation is dismissed far too quickly. So, what we are left with in the end is just another ragbag—that of the **lexical cohesion** of Chapter 6, which should make interesting reading both in point of data and of interpretation to all those having an interest in what is currently called 'semantic networks'. For it is at this stage that semantic networks, in the very narrow sense of the word, come into the picture, and are viewed both syntagmatically and paradigmatically. But it is unfortunate that the level of generalization is so low and many of the token data fringe the trivial.

10. Reading the chapter devoted to **collocation** (pages 264 ff), one again gets the feeling that slight modifications in the definition of fundamental theoretical constructs can easily lead to substantial modifications in the overall angle of vision. This is very much the case with collocation, which, in spite of its strong syntagmatic suggestion, is here taken to mean potential (vs. actualized) semantic paradigms, which presuppose but never fully linearize, co-occurrence, e.g. series of synonyms (climb, ascend), series of antonyms (boy, girl; child), closed lists (days of the week, months of the year etc) etc. It is true that such items do form **cohesive chains** in a text (page 286), but in addition to that there are the paradigmatic 'chains' which evince considerable pragmatic variability, i.e. from one individual to another, and largely account for the sometimes astounding discrepancy in the quantity of information per partial sequence of text when monitoring discourse in reception; we know full well that a doctor 'sees' more in the (same) medical text than a nurse does, and the nurse, if she is bright, may 'see' more than the patient indeed does. The authors disregard such pragmatics [sic!] aspects completely, as do most linguists. The text selected for illustrating collocation

(pages 286 ff) for instance, has been chosen expressly in order to minimize such variability in potential range of internalized paradigms. Lexical cohesion, as the authors amply show, is indeed based on **reiteration and collocation**. That is, without doubt, a good beginning, but one is left wondering whether it is in any way half the bottle.

11. The last but one chapter, devoted to **the meaning of cohesion**, discusses variability of tension (tight/loose) at the level of semantic texture; the sketchy diagrams, however, are merely hypothetical, and would require a great deal more explanation before they begin to make real sense. The notion of **Imaginary Texture** is most attractive, and makes one think of Voltaire himself, misleadingly presenting the first edition of ***Candide*** to his readers as a text "traduit de l'allemand", meant to suggest certain imaginary expectations in point of texture.

Though solving but few theoretical problems in any way adequately, the authors go on and ask theoretical questions in the discussion of data such as—

((7:13) (Spurs played Liverpool. They beat them.))

How do we actually know who 'actually' beat who?

((7:15) (The cops chased the robbers. They eluded them.))

((7:18) (These ponies the children were given by their grandparents. Have you seen them?))

Such instances come very close to language material of the type—

The box is in the pen.

extensively discussed by Bar-Hillel (1960 : 158-163). On the basis of such material it is quite clear that any general procedure capable of achieving the context resolution of ambiguity would in such instances in particular have to have access to **an unlimited amount of factual information**. **This open-endedness in text processing**, which often accounts for the difficulty of the subdiscipline, is artificially restricted by Halliday & Hasan in the discussion of the above examples to the issue of co-interpretation.

12. Finally, in addition to accepting the idea that a text is in one way or another structured on the basis of a set of factors, such as texture, cohesion, (un)marked focus, etc (the absence of such structuring would lead to "a non- or pseudo- text"!), the also advance the concepts of information structure (page 317) and discourse (page 327).

There is no attempt anywhere in the book of correlating these three major types of structuring beyond the sentence and of providing a differentiated description of them. It has been well known for several years, ever since the ETIC Symposium on Language for Special Purposes, Halliday has been promoting the idea of information structure, without ever taking the real trouble of minutely explaining what he really means, and what the far-reaching consequences of such a construct would be, if it were to be clearly dissociated from language.

13. The conclusion of the book gives a set of general principles stating that a tie is a directional relation including both the linearized elements and what is presupposed by them; such ties may be either immediate, or mediated, or remote. And the distance between at least certain ties can be counted in number of sentences. But can it really? Particularly if we are prone to abandon the narrowly 'surface' or 'linear-manifestation' approach that the authors themselves have adopted...

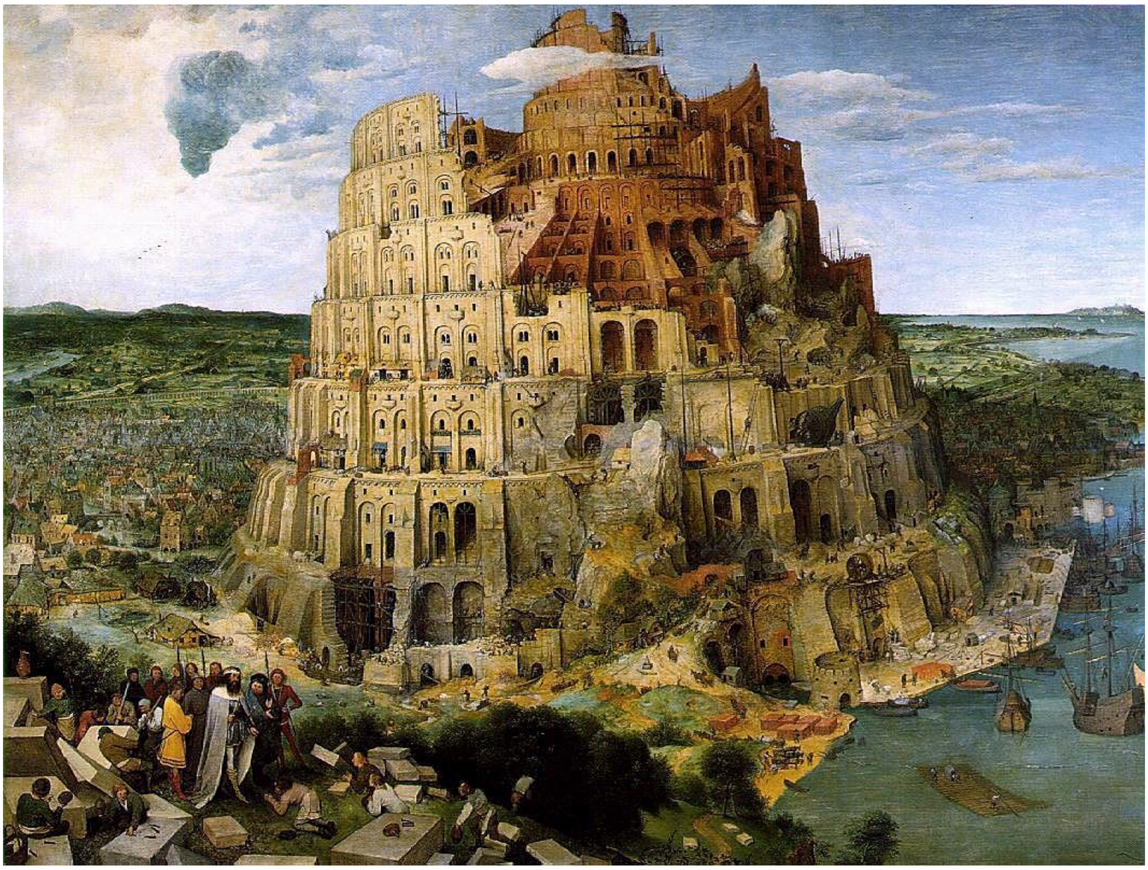
14. As far as **our** conclusion regarding the present book review is concerned, the book constitutes an excellent presentation of problems, a set of lucid analyses of discourse data, accompanied by an overtaxonomized attempt at providing an explicit description. This the authors have in common with Sinclair & Coulthard 1975. But then there is the more regrettable attempt—which Sinclair was very much aware of, and carefully avoided—namely, that of incorporating as much of the discourse data as possible into the lower levels of grammar and lexis, where Halliday certainly feels more at home.

But the fact remains that discourse is a separate level of investigation requiring specific methodology and its own theoretical constructs, and the authors have in no way managed to disprove that principle. On the contrary, they seem to have reinforced it.

15. The very great merit of the book is that it takes up and discusses quite a few of the so far taboo problems of the linguistic discipline, and this is done in a very accessible way for a wide public, and in simple language, with clear definitions, constantly emphasizing the practical consequences. There are, it is true, quite a number of problems which are swept under the carpet—such as, (a) the real

correlation between linear manifestation and semantic interpretation at the level of what we have called hypermorphemes (which is indeed the real discourse level), (b) how conjunction relates to recent research in modern symbolic logic (cf. the treatment of not, as a substitute rather than unary connective), (c) the status of pragmatics (sic!) factors at least in a discourse of the type (This item of furniture can be bought in China but not abroad.), which contributes considerably to placing the speaker in space, and last but not least, (d) the real significance, if any, of topic/comment research within a consistent model of "semiotic interaction" (cf. page 320).

The book does not solve many problems, nor does it put across any definite model for the description of discourse, but when all is said and done in point of explanation, it still remains an impressive edifice to look at on the long and tortuous Jakobsonian path of adequate **Fragestellung** in linguistics.



1977. Vienna

Structuring Discourse Connectors in Dialogue

(Paper given at the **Twelfth International Congress of Linguists**, Vienna, 29 August to 2 September 1977, within Section Seven, entitled Textlinguistik: Dialog.)

Abstract

Underlying all discourse patterning are several types of discourse connectors, either concrete or abstract in their nature. They are closely related to and dependent on discourse typology (in the Charles Morris sense).

Dialogue is characterized by the systematic occurrence of participant boundary, as defined in Sandulescu (Oslo, April 1975). Discourse presuppositions (cf. Åbo/ Turku, November 1975) and Gricean conversational implicatures contribute to outlining a covert matrix of the abstract connector K.

The interplay between the overt and covert matrices (cf. Texas, April 1976) provides in the last analysis the complex structuring of discourse from the viewpoint of both Form and Matter. For a correct understanding of discourse mapping in both production and perception—as an operation endowed with both psychological and communicative reality—the model must be supplemented with a subtheory of discourse heads (cf. New York, March 1976) and a subtheory of non-standard conjoiners (cf. Helsinki, October 1976).

The model attempts to give heterogeneous information a homogeneous treatment within a semiotic frame of reference grounded on Peirce and Morris. It is advanced that the far-reaching implications of Grice's Co-operative Principle and Implicatures, and Lakoff's Conversational Postulates are far from being exhausted. Unostentatious violations of Gricean maxims are analysed.

C. George Sandulescu
Constraints on Discourse
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1978. Denmark.

Text and Speech Act: A Propositional Analysis of Discourse

(This paper was prepared for **Det 4. nordiske lingvistmøde** pa Hindsgavl Slot, Middelfart, Denmark, which took place between 6th and 8th January 1978.)

Abstract

1. The starting point is (a) a subset of Swedish texts, and (b) a subset of English texts in a clear Paraphrase Relation to each other (both within one and the same subset, and between the (a) and (b) subsets.

2. On the basis of this informationally homogeneous set of texts, a system of **theoretical constructs** is devised, the most important of which are:

(i) **the Hypermorpheme hM**, provisionally defined as a "conjoinerless" simplex sentence of the SVO type, e.g. 'The little student worshipped the Great Master (for a few hours)';

(ii) **the discourse Head dH**, provisionally defined as a recurrent segment, evincing absolute hierarchical organization, directly derived from variable frequency of occurrence, and determining both discourse structure and illocutionary force at discourse level.

3. The overt and the covert discourse Heads of a text can be assigned a whole range of Representational Fields on diagrams specially devised in order to accommodate both assertions and discourse presuppositions. Special attention is paid to the diagrammatical representation of REFERENCE versus PREDICATION (cf. Searle 1989 : 72-123, and Sigurd 1974 : 18).

4. The conclusion of the study manifestly points to the existence of at least three distinct types of structures, both information **i** and grammatical **g** (out of a possible

number of four, namely Sg(b), Sg(a); Si(b), and Si(a)). It is the correlation between these widely different types of structure that should ideally form the object of a linguistic model.

The basic task of Discourse Analysis is, then, to correlate below-the-sentence parameters with above-the-sentence factors, without losing sight of the balance between propositional content and illocutionary force.

Another important conclusion is that the notion of discourseHead is a pragmatic category, largely dependent on the nature of the speech act.

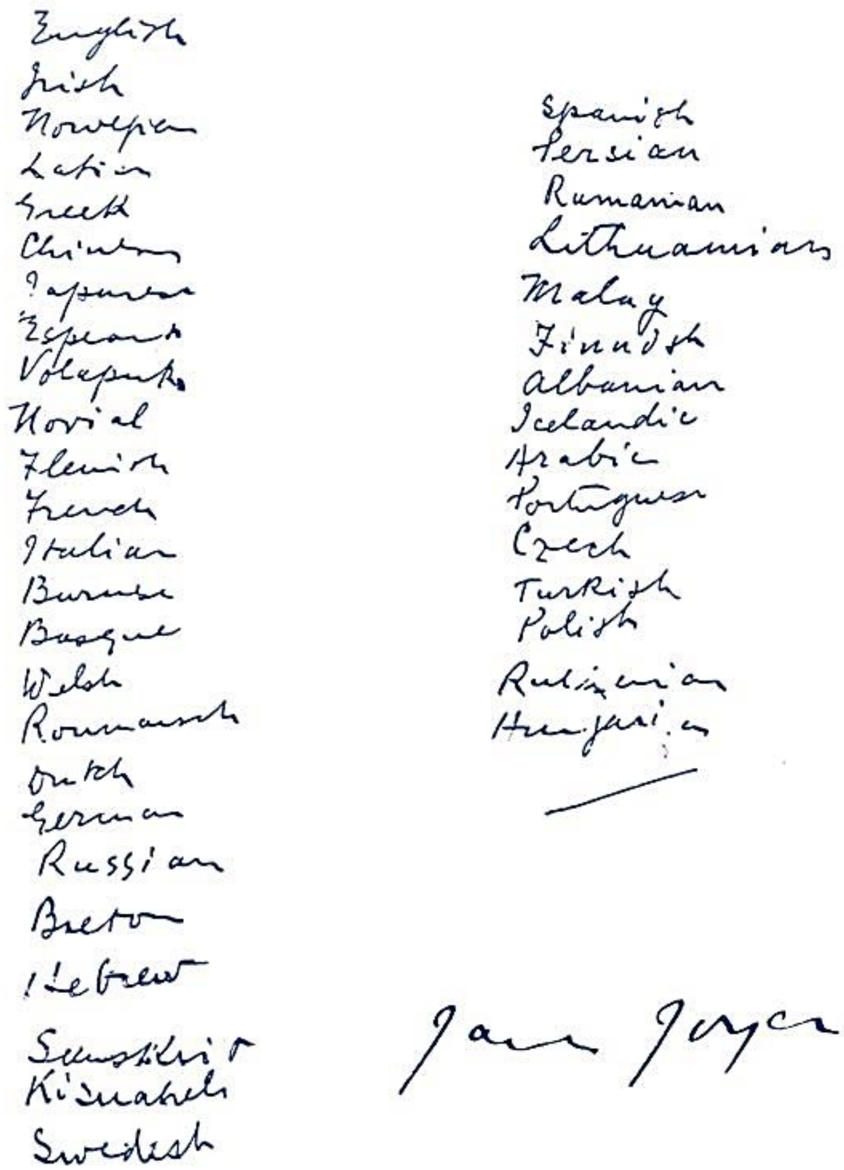
Finally, the last conclusion is that **the paraphrase relation** should be as important to the linguist as it is to the philosopher.

5. References: Familiarity with John Searle's Speech Acts, Cambridge U.P. 1969, and with Bengt Sigurd's Experiment med Text (PILUS, No. 25, October 1974) is advised for an easy understanding of the frame of reference. Passing mention will also be made to Nils-Erik ENKVIST's notion of Theme Dynamics, as outlined in his Linguistic Stylistics, Mouton, 1973, pp.115-127.

The study is also grounded on the twenty documents circulated within the ***Working Group of Speech Acts*** at the **Vienna Congress of Linguists** in late August 1977, and on the papers presented in the Section **Text Linguistics: DIALOGUE** of the same Congress.

Part Two
InterDisciplinary Research

Holograph List of the 40 Languages used by James Joyce in writing *Finnegans Wake.*


English
Irish
Norwegian
Latin
Greek
Chinese
Japanese
Esperanto
Volapük
Novial
Flemish
French
Italian
Burmese
Basque
Welsh
Roumansh
Dutch
German
Russian
Breton
Hebrew
Sanskrit
Kiswahili
Swedish

Spanish
Persian
Rumanian
Lithuanian
Malay
Finnish
Albanian
Icelandic
Arabic
Portuguese
Czech
Turkish
Polish
Ruthenian
Hungarian

James Joyce

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Literature Press

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The University of Bucharest. 2015

1974. Milan

James Joyce: Epiphany and Code

(Paper given at the First Congress of the International Association of Semiotic Studies, which took place in Milan between 2 and 6 June 1974, organized by Umberto Eco, and subsequently reissued in *The Language of the Devil*.)

Abstract

The main purpose of the paper is to describe what its author calls **The Chrysostomos Phenomenon**—a convenient start for a linguistic approach to the Joycean text, paying due attention to the complex and controversial issue of epiphany (ontological & linguistic, overt & covert).

Thus, JOYCE, EPIPHANY and linguistic CODE are the three major ingredients of the said phenomenon. Starting from ideas already put forth in Sandulescu (1967, 1968a, 1968b, 1970), brief outlines are given of the relation between texture and structure, and of **Linguistic Perspectivism**.

The Chrysostomos Phenomenon is then described, illustrated and analysed. Along the same line of thought, a distinction is suggested between Association (in the sense in which the word is being used in psychology), and Connection (in the sense in which the word is used by Whorf 1927a).

The hypothesis is advanced that an adequate linguistic description of *Finnegans Wake* cannot be merely analytical and taxonomic in character, but rather must both start from and lead to a new conception (or theory) of the semiotic code— with due consideration given to the cognitive code—, both grounded on a consistent view of epiphany, and resulting in palimpsestic formulae of the type

X + Y ←→ Z

Such formulae operate at all linguistic levels (phone, phoneme, **morph**, morpheme, phrase, clause, sentence, discourse), and within them X and Y are accorded archetypal values (either linguistic or purely 'cultural'), whereas Z often fulfils a token function, with stage or stages missing in the processes of either Association or Connection.

A paradoxical binary opposition of Archetype/Token is thus established.

It is finally suggested that linguistic FW investigations be placed within a communicative frame of reference, as defined not only by Whorf (1927a), but also by Hymes (1971).

The conclusions thus reached may further require a reassessment of the notion of cognitive code in the light of communicability, fluidity, and semantic radiation.

The paper is too short for a demonstration; it is, however, long enough for a fairly detailed presentation of the hypothesis.



1977-1978. Stockholm.

Notes on the Meaning of 'Communication'.

(Informal Seminars held at the University of Stockholm in 1977-1978 as part of the joint sessions of the Departments of Psychology and of General Linguistics.)

0. Epigraphs

He laughed because he thought they could not hit him—he did not imagine that they were practising how to miss him.

(Brecht.)

All men use the same words, but they do not understand one another. And it is useless for men to try to 'reach an agreement' on the meanings of words.

(Octavio Paz, translated by Sam. Beckett.)

1. On the Method

The title of the present discussion is patterned on Austin's wellknown essay 'The Meaning of a Word' (1940). The method to be adopted in this investigation is that of 'linguistic phenomenology', as sketchily, but clearly outlined by the same John Austin is the following passage from 'A plea for Excuses' (1956), and which ultimately derives from the work of Husserl (1900-1901; 1913):

> (Austin 1970 : 181-2) *Words are our tools, and, as a minimum, we should use clean tools: we should know what we mean and what we do not, and we must forearm ourselves against the traps that language sets us. Secondly, word are not (except in their own little corner) facts or things: we need therefore to prise them off the world, to hold them apart and against it, so that we can realize their inadequacies and arbitrariness, and can re-look at the world without blinkers.*

And of course, the work of Wittgenstein, who notes on the very first page of

his *Lectures on Aesthetics*, first published in Oxford only in 1966—

> (Wittgenstein: …) *I have often compared language to a tool chest, containing a hammer, chisel, matches, nails, screws, glue. It is not a chance that all these things have been put together – but there are important differences between the different tools…*

The discussion which follows is indicative of a genuine and acute need for a special multi-disciplinary investigation to deal with 'communication', in its real everyday usage by the scientists, which is over and beyond mere dictionary definitions. These lecture notes only give a bare outline of the area of research, and claim neither completeness nor consistency.

The concept of 'Communication' enters late into the field of theoretical linguistics, perhaps as late as 1971, with Dell Hymes's analysis of 'communicative competence' (as opposed to Chomsky's 'linguistic competence'). In this way, the history of the theoretical construct 'communication' is strongly analogous to that of 'presupposition', which was extensively discussed by Frege in the 1890's (cf. also Husserl's Principle of Presuppositionless Understanding, formulated in 1900), but paradoxically, the first true linguist to take it up did so only around 1968 (cf. George Lakoff, 1968, 'Presupposition and Relative Well-Formedness').

2. Sample Problems

Let us begin with a few examples:

Example 1: Degree of Communication Failure:

a. Suppose a man is driving his car along a country road. **b.** Suddenly he sees a house on fire. **c.** In front of it, an old farmer is working away in his garden, his back turned to the house. **d.** The driver stops the car, puts his head out of the window, and shouts at the old man—'Your house is on fire!' **e.** The farmer waves his hand in a friendly gesture at the driver, while the car is dashing away; then he sighs, and goes on digging in his garden, sufficiently far from the house not to notice anything. (The old man is quite, quite deaf.)

Question at this stage: Did the driver communicate with the old man?

f. An unseen neighbour, inside the house next door, had heard the driver's message

(though it was not at all intended for him); he dashes out of the house, runs across to the house on fire, and puts the fire out.

Question at this stage: Did the driver put across his message?

We tend to give a negative answer to the question as formulated after stage (**e**), and an answer in the affirmative to the same question as paraphrased after stage (**f**). This question (in its both paraphrase variants), though it may sound very practical, has far-reaching implications for Communication Research: the driver indeed managed to put across his meaning (that being due mainly to chance that a neighbour happened to overhear the message!), but **The Intentionality Requirement** has been violated.

Example 2: Degree of Communication Failure:

Suppose Adam writes a letter to Bertil proposing a joint venture and inviting Bertil's participation. Bertil replies in the affirmative, but the letter is lost in the mail. After a while Adam concludes that Bertil is ignoring his invitation, and resolves to disregard him in turn. Bertil, on the other hand, feels offended that his answer is being ignored, and also decides not to contact Adam any more. From this point of view their silent enmity may last for ever, unless they decide to investigate what happened to their respective communications, that is, unless they begin to meta-communicate. Only then will they find out that Adam did not KNOW that Bertil had replied, while Bertil did not know that his reply had never reached Adam.

As can be seen, in this example a fortuitous outside event interfered with the congruency of **Move Sequentialization.**

Example 3. Degree of Communication Failure:

Suppose Ada and Bertie are talking on the telephone, and they are unexpectedly cut off after three minutes. They both want the connection restored immediately, which it will be if and only if one of them calls back while the other one waits. It matters little to either of them whether *she* is the one to call back or the one to wait. They must each choose whether to call back, each according to the expectation of the other's choice, in order to call back if and only if the other one waits. Which one?

N.B. The analysis of this example should be done in terms of **Move Expectation in game theory**.

Example 4. MetaCommunication as communication:

Suppose that the husband, while alone at home, receives a long-distance call from a friend who said he would be in the area for a few days. The husband immediately invites the friend to stay at their home, knowing that his wife would also welcome this friend and that, therefore, she would have done the same thing. When the wife comes home, a bitter quarrel arises over the invitation the husband had extended to the friend. Upon analysis, both husband and wife agreed that to invite the friend was the most appropriate thing to do. They were perplexed to find out that they agreed, and yet disagreed on what appeared to be the very same issue.

The conflict in communication ultimately arose from an argument essentially of the type—'Well, you may be right, but you are wrong because you are arguing with me!'. In other words, they disagreed on the **metaCommunicational level**—i.e. from the point of view of the 'relationship', but tried to resolve the disagreement on the content level.

Example 5. Report versus Command:

(a) Let A, B, and C be a linear chain of neurons. Then the firing of neuron B is both a report that neuron A has fired, and a command for neuron C to fire.

(b) The message "It is important to release the clutch gradually and smoothly" and "Just let the clutch go, it'll ruin the transmission in no time!" have approximately the same information content (i.e. the report aspect) (i.e. STAND IN A CLEAR PARAPHRASE RELATION), but they obviously define very different pragmatic 'relationships'.

An analysis of these two examples leads us to the two operations which have come to be known as the **Report** and the **Command** aspects of any communication.

Example 6. Man-Animal Communication:

(a) If the foot of a walking man hits a pebble, energy is transferred from the foot

to the stone; the latter will be displaced, and will eventually come to rest again in a position which is fully determined by such factors as the amount of energy transferred, the shape and weight of the pebble, and the nature of the surface on which it rolls.

(b) If, on the other hand, the man kicks a dog instead of the pebble, the dog may jump and bite him. In this case, the relation between the kick and the bite is of a very different order. It is obvious that the dog takes the energy for his reaction from his own metabolism and not from the kick. What is transferred, therefore, is no longer energy, but rather information.

Hence, Communication is to be roughly defined as "an exchange of information", and never as a "transfer of energy". What then remains to be defined is the notion of **Information** (instead of, or alongside with, that of Communication.)

Example 7. Intentionality:

If someone has his toes stepped on by another, it makes a great deal of difference to him whether the other's behaviour was deliberate or unintentional. This view, however, is based on his own evaluation of the other person's motives and, therefore, on assumptions about what goes inside the other's head. And, of course, if he were to ask the other about his motives, he could still not be certain, for the other individual might claim his behaviour was unconscious when he had meant it to be deliberate, or even claim it was deliberate when in fact it was accidental.

All this brings us to the question of **Attribution of Meaning**.

Example 8. Violation—ostentatious or not—of Gricean Maxims:

Suppose two strangers are accidentally brought together: one of them wants to make conversation and the other does not—for instance, two airplane passengers sitting next to each other. Let passenger A be the one who does not want to talk. There are two things he cannot do: **(a)** he cannot physically leave the field, and **(b)** he cannot NOT communicate.

The Pragmatics of this communicative situation are narrowed down to the following three alternatives: **Alternative One**. 'Rejection' of communication: Passenger A can

make it clear to passenger B, more or less bluntly, that he is not interested in conversation. Since by the rules of good behaviour this is reproachable, it will require courage and will create a rather strained and even embarrassing silence, so much so that a relationship with B has not in fact been avoided. **Alternative Two**. Acceptance of communication: Passenger A may give in and make conversation after all. In all probability he will hate himself and the other person for his own weakness. But once A has started to respond, he will find it increasingly difficult to stop. **Alternative Three**. Disqualification of communication: A may choose to defend himself by means of the technique of disqualification, i.e. he may communicate in a way that invalidates his own communications or those of the other. Disqualifications cover a wide range of communicational phenomena: (a) self-contradictions, (b) inconsistencies, (c) subject switches, (d) tangentializations, (e) incomplete sentences, (f) deliberate misunderstandings, (g) literal interpretation of metaphor, (h) metaphorical interpretation of literal statement etc. (cf. also another type of analysis in terms of (1) Confirmation, (2) Rejection (i.e. "You are wrong!"), and (3) Disconfirmation (i.e. "You do not exist!").

Example 9. Semantic Approximation:

(WIFE) (ASIDE) I think I have a very cute smile...
(HUSBAND) (SILENCE)
(WIFE) I've never heard you say I have a cute smile... Do you think I have a cute smile?
(HUSBAND) Oh, yes, I think you have the cutest smile of anyone since the world began...
(WIFE) (ASIDE) Even when he says it, he does not say it!

What we tend to obtain here is the concept of **Zero Information** of a given message, the message thus becoming a 'dummy message'. This is more often than not achieved on the basis of the **Principle of Semantic Approximation**.

Example 10: The Christmas Dinner Language Game:

Suppose there are four players, say, having Christmas Dinner—call them Ada, Bertie, Cissa, and Dave. They indulge in two distinct kinds of communication: (a) bilateral (with only two players involved), and (b) general (with all four players involved). There are two distinct operations that they all perform: (c) reception, and (d) production. In production, the players can only resort to two kinds of moves: (e)

initiating moves, or (f) responding moves. The players' knowledge of languages is as follows: A knows two languages—Swedish and German; C knows three languages—Rumanian, French, and German; B knows four languages—Swedish, English, French, and German; and finally D knows five languages—English, Swedish, Rumanian, French and German.

Question at this stage: What is the language pattern for **general** communication? Restrictions: (a) B and D refuse to speak German, though their level of communication is quite high; (b) C half-refuses to speak German, using it exclusively for bilateral communication; (c) there is a close correlation between **Move Directionality** and **Code Selection**.

Example 11. The Never-Explain—A Game as a Fundamental Communication Game:

Suppose there are two players, call them Candide and Voltaire, engaged in a game against each other. The very first rule of the game is that only one of the players should know the rules of the game. Hence, rules are never explained and neither are they systematically disclosed; but any time Candide breaks a rule, Voltaire imposes a certain penalty upon him, e.g. go back to square one etc. (cf. epigraph of present paper by Bertolt Brecht.) In other words, Candide's task, in order to win, is to learn absolutely all the rules of the game through trial and error exclusively, and Voltaire's task as a player is to prevent Candide from winning the game. (In a nastier variant, Voltaire keeps changing the rules so that Candide may never get to learn them.) The result of this procedure is that slowly and painfully Candide learns all the rules. There is of course a chance that Candide may never learn these rules (cf. butler James in 'Same Procedure as Last Year' endlessly stumbling over the leopard's head). But the game necessarily ends—at least in theory—with Candide becoming Voltaire.

Question: Are the two players entitled to go on playing (what game they play is quite irrelevant), once Candide has learnt all the rules of the game? For, as such, he automatically disqualifies himself from playing the game by virtue of having violated the very first rule of it...

Note: A learner of Swedish, English, or any other language for that matter, disqualifies himself from playing the game, once a certain level of proficiency has been attained, i.e. once he is able to communicate satisfactorily. (The notion

of **SATISFACTORY COMMUNICATION** remains to be defined.)

For ever-changing rules of the same game, see Spying, Secret Service activities, particularly in war time as well as the drafting of Secret Codes.

3. Delineation of Semantic Field: Typology of Communication

There are the following fundamental types of Communication, as expressed by means of three binary oppositions:

1. [**+ HUMAN**] Communication;

2. [**+ VERBAL**] Communication; and—

3. [**+ INTENTIONAL**] Communication.

Semiotics, and its journal **Semiotica**, would very largely deal with the non-verbal variety. **Semiology**—as a branch of medicine, sometimes called symptomatology—would handle the unintentional phenomena, including pathological versus normal communication. Finally, as to intentionality, it is to Husserl and Brentano that we owe the theoretical foundations of the concept.

On the basis of these three fundamental types of communication, we can distinguish the following communicative patterns:

1.0 MAN: MAN

Adult: Adult.
1.2 Adult: Child. #
Mother: Child [+ Boy]…
1.3 Child: Child.
1.4 Man: Woman.

2.0 MAN: NATURE

2.1 Man: Animal.
2.2 Animal: Animal.

(N.B. Remember William Blake—"Where man is not, nature is barren", in Marriage of

Heaven and Hell.)

3.0 MAN: MACHINE

3.1 Man: Machine.
3.2 Machine: Machine.

Note 1: Across the categorizations 1.0 to 1.4 lies the distinction **NORMAL** versus **PATHOLOGICAL** Communication, and the linguistic analysis of Schizophrenese, a type of discourse which leaves it up to the listener to take his choice from among the many possible meanings which are not only different from but may even be incompatible with one another.

Note 2: Categorization 2.2 is a special form of Man/Animal Communication, as Man invariably functions as **ACTIVE OBSERVER** of such communication—hence, it becomes "man-mediated".

Note 3: Under point 2.0 one should perhaps further distinguish between (a) Communication with **Animate** Nature, and (b) Communication with **Inanimate** Nature (cf. Examples 6 and 7).

Note 4: The same argument as in Note 2 applies also to Category 3.2; it applies in a somewhat modified form, as man is not only active observer, but also (a) artificer (i.e. inventor and designer) and (b) trigger (cf. also two computers endowed with moral qualities, in the film Star Wars, for instance). cf. also Meetham, ed. 1969 : 49ff).

Note 5: In establishing a communicative pattern, there is also the question of **DIRECTIONALITY OF PATTERNING** in the sense "Who holds the **rule-establishing** function?"

4. The Ultimate Propositional Nature of Communication

4.1 The essence of communication is propositional. This means that there is no full-fledged communication below the level of the proposition. This also means that all communication is in the last analysis reducible (or perhaps expandable?) to a propositional paraphrase. There is, in other words, no complete communication below the level of the proposition, framed in a speech act (or rather, a communicative

act). Such an attitude may ultimately be, however, another instance of 'human imperialism' (cf. Roman Jakobson) over communication analysis.

4.2 Lexical signs are very much like phonemes in that they only carry meaning partially, and only to an extent that allows definition at meta level. But these meaning-potentials are turned into Husserl's 'meaning-fulfilment' only as part of the communicative act (see **Discourse Analysis).**

4.3 In their turn, propositions (or propositional paraphrases) are assigned complete meaning only in discourse (as Segments of discourse).

5.0 Principles and Rules of Communication

The following set of Principles are operational in communicative situations:

5.1 The **Cooperative** Principle, (Grice).
5.2 The Principle of **Expressibility**, (Searle).
5.3 The Principle of **Accessibility**.
5.4 The Principle of **Tolerance**, (Bronowski).
5.5 The Principle of **Semantic Approximation**.
5.6 The Principle of **Inabsolute Certainty**, (Bronowski).
5.7 The Principle of **Presuppositionless Understanding** (Husserl).
5.8 The Principle of **Compulsive Communication**, (Watzlawick).

To each of these Principles is added a set of rules (called **Maxims** by Grice). For a more extensive discussion of the notion of Rule, cf. Itkonen 1976. Depth studies of these Principles lead to the clarification of the fundamental category of **Communication**. For example, according to the Principle of **Tolerance**, "all information can be exchanged only within a play of tolerance"; this refers both to the exchange of information between man and man, and to the exchange of information between man and nature. According to the Principle of **Compulsive** Communication, "one cannot not communicate", despite popular belief that one can; even suicide is ultimately a form of communication. According to the Principle of **Accessibility**, the rule-establishing role (perhaps the more institutionalised, and the more dominating) in the interaction decides upon the level of accessibility; in less formally institutionalised situations, the more dominating role is that of the message-producing agent. Finally,

the Principle of **Inabsolute Certainty** avoids the absolute certainty characterizing dogma and dogmatism, and ensures the right to reject communication on content grounds across institutionalised barriers; as such it is related to the **Cooperative** Principle. In **conclusion**: the Principles of Communication (and some of the derived rules) are of two fundamental kinds: (a) **abstract**, i.e. remote, or theoretical, or philosophical; (b) **concrete**, i.e. immediate, or operational, in essence.

All the principles so far outlined are unified mainly by their pragmatic importance, which in turn rests not so much on their particulars as on their interpersonal (rather than individualistic) reference. Birdwhistell (1959 : 104) has even gone so far as to suggest that—

> an individual does not communicate; he engages in or becomes part of communication. He may move, or make noises… but he does not communicate. In a parallel fashion, he may see, he may hear, smell, taste, or feel—but he does not communicate. In other words, he does not originate communication; he participates in it. Communication as a system, then, is not to be understood on a simple model of action and reaction, however complexly stated. As a system, it is to be comprehended on the transactional level.

'Communication as a transactional system' is a very important conclusion indeed, particularly in the light of **systems theory** (cf. Emery, ed. 1969).

6. Games People Play

Communication is a co-ordination problem, in the David Lewis (1969 : 8ff) sense. There are in fact two fundamental types of games: (a) games of **pure co-ordination** (e.g. the relations existing between the member of one and the same soccer team, or any other team for that matter, the relations existing between ideal husband and ideal wife, etc); (b) games of **pure conflict** (say, the relations existing between two chess players or two boxers pitched hard against each other; more remotely, the relations between two soldiers belonging to opposite camps in a proper war between specified countries). This distinction is of paramount importance, as Communication is not exclusively a co-ordination game, but rather, in order to be more accurate, one must say it is a complex combination of both game types: communicational conflict may easily emerge under the cordial garb of co-ordination (i.e. smooth and polite rules of behaviour, even among bitter enemies…). In support of this statement cf. **Example 8:** acceptance / rejection / disqualification of communication; confirmation / rejection

/ disconfirmation of communication.

The theory of games is indeed a useful scaffolding for the analysis of some of the conventional aspects of communication. But a theory of communication, however far from it we are at the moment, can be restated without much reference to game theory. However, no consistent theory of communication could be explicitly stated without reference to Gricean maxims and principles.

Between **pure conflict** and **pure cooperation**, there is a whole range of possibilities on the continuum (or cline), as there is also between complete agreement (i.e. dogma?) and complete disagreement (i.e. chaos?). Roman Jakobson expressed this communicational dichotomy about 50 years ago as follows—

> (Jakobson 1960 : 350) The success of a political convention depends on the general agreement of the majority or totality of its participants. In a scholarly discussion, however, disagreement generally proves to be more productive than agreement.

Upon a close analysis of **conversational discourse** we indeed detect complicated games of disagreement, carefully disguised as games of agreement.

7. Digital and Analogic Communication

Human beings communicate both digitally and analogically. Digital language has a highly complex and powerful syntax, but lacks adequate semantics in the field of 'relationship', while analogic language possesses the semantics, but has no adequate syntax for the unambiguous definition of the nature of relationships.

What is **analogic** communication? The answer is relatively simple according to Watzlawick (1968 : 62), in that it virtually covers all non-verbal communication, comprising posture, gesture, facial expression, voice inflection, the sequence, rhythm, and cadence of the words themselves, and any other nonverbal manifestation the agent may be capable of; it may also include all the communicational clues unfailingly present in any context in which an interaction takes place. As such, animal communication is to an overwhelming extent analogic communication. Man is the only organism known to use both the analogic and the digital modes of communication (the evidence for whales and dolphins is not wholly convincing). All analogic messages are invocation of 'relationship', and as such can carry indications of love, hate, combat etc, but not truth values.

In **digital** communication, on the other hand, the level of 'relationship' between the agents involved in the interaction may remain to a large extent undefined

(cf. example 9). The bringing of a gift to somebody is undoubtedly a piece of analogic communication.

The actual **correlation** between the two modes has been very plainly and simply explained by the very fact that, from the strict linguistic point of view, speech is made up of discrete and fairly stable entities—such as **phonemes, words, and phrases**—whereas in physics it is seen as a continuum, with entities linearised on the time dimension. It goes without saying that the distinction Digital vs Analogic is drawn from computer science (and has of late evolved more than considerably), whereas linguists are more familiar with the binary opposition **Discreteness vs Continuity**, as discussed by Stankiewicz (1957) in his article "On Discreteness and Continuity in Structural Dialectology".

The consistent correlation of Discreteness with Continuity is still one of the weak points of the Philosophy of Science.

8. Theoretical vs Applied

Starting from Husserl's bipartite division of sciences into (a) **nomological,** i.e. abstract, i.e. explanatory, such as Logic, and Mathematics, and (b) **ontological**, i.e. concrete, i.e. descriptive, such as geography, history, astronomy, natural history, anatomy etc the question is worth elucidating whether communication research belongs to the former or the latter group (cf. *Logische Untersuchungen*, par. 64). The interesting thing is that Husserl completely disregards today's ever so popular division into **humanistic** and **exact** sciences, and introduces instead an ultimately tripartite classification: (a) abstract, (b) concrete, and (c) normative sciences. The problem is further complicated by the fact that both communication and linguistics claim that they have features belonging to all three categories of sciences. Then there is the question of (a) explanatory power, (b) descriptive power, and (c) normative capacity.

The fundamental proposition of any normative science is that 'A should be B' (cf. Husserl's example 'A soldier should be brave'); this is in effect the standard proposition in **lexicography**—a branch of linguistics—and of code preservation (i.e. conventionalisation and standardization) in the field of communication as such. One thing is clear: Linguistics is a branch of communication in much the same way in which grammar and lexicography are branches of linguistics; though Chomsky claims that linguistics is a branch of **theoretical psychology** (1964 : 112), and Montague retorts that "the syntax, semantics, and pragmatics of natural languages are branches

of **mathematics**, not of psychology" (1974 : 2).

Ripping across all the above distinctions, and thus complicating the picture considerably, is the dichotomy theoretical vs applied. Symptomatic of the topicality of this issue is the way it is presented in the very Foreword to *The Encyclopaedia of Linguistics, Information, and Control* (1969), which is indeed the most ambitious attempt to date with a view to presenting a consistent survey of communication research and integrate linguistics into it. Here is what it says about application in linguistics:

> (Meetham 1969 : XII) 'Applied linguistics' covers all aspects of the application of the theory and techniques of linguistics to specific practical purposes, e.g. modern language teaching, speech therapy, information retrieval, communication technology, and machine translation […] A frequent mistake is the identification of applied linguistics with general linguistics.

After all this discussion we are still left with an open question as regards the **exact status** of communication research. Is it ontological and applied alongside with anatomy, mineralogy, or meteorology? Or does it share more than a touch of normativity together with ethics and education? Finally, is it endowed with any explanatory power at all, or is it for the time being restricted to description only? Explicit answers to these questions are relevant not only for the philosophy of science, but also for the future of each and everyone of our disciplines—be it psychology or linguistics, ethology and education, child language or Scandinavian studies. Further genuine progress in the field of communication directly depends upon the further clarification of fundamental theoretical constructs, the theoretical status of the discipline, and the hierarchical relations with all the other branches of science. The status of communication as it emerges from the latest discussions and studies should unfortunately be described as merely ontological and applied, and endowed with **less than minimal** explanatory power.

9. Conclusions

9.1 Communication means "exchange of information". This shifts the definitional load to exchange and information—both of them fundamental pragmatic categories. Regarding exchange one must emphasize reciprocation ("There is no communication in absolute solitude"), and regarding information one must emphasize relativity

("What is information to you is not necessarily information to me").

9.2 "Communication is a transactional system" is a very important conclusion, particularly in the light of systems theory. Hence, the significance of Birdwhistell's "An individual does not communicate" (q.v.). The transitive use of the verb communicate is, in Austin's terms, tantamount to a dirty tool.

9.3 There is a wide meaning of communication, and there is a **narrow** meaning of it.

9.4 The greatest problem still to be solved by the philosophy of science in order to promote a genuine advance in communication research is the establishment of a consistent correlation between **Discreteness and Continuity** as two complementary modes of carrying information. This open question is theoretical, not practical.

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Towards an Integrated Theory of Fictional Devices.

[This is the Abstract of a paper submitted to, and then read at, **the World Congress of Narratology**, which took place in June 1991 at the University of Nice.]

Abstract

1. The Centrality of Device. For a coherent theory of fiction the concept of Device is as important as the whole range of 'physical' devices resorted to in the recent Gulf War, or the IRA ones in Ireland.

2. The Non-Devices. Further, the concept of device, properly developed, presupposes a whole range of non-devices to go with it in the formation of a theory; from among them mention should be made of Language (as instrument), of Voice (as recently defined in Monaco by D. Donoghue), and of the Pragmatic Component of Ch. Morris's Theory of Signs; possibly also W. Labov's Narrative Universals.

3. Text Constitution. The main task of a device-based theory of fiction is that of describing a fictional text in much the same way a linguist—say generativist, for meticulosity—describes a given language, or a language subset.

a. Text Constitution in **James Joyce**, esp. within a FW approach, can be contemplated and examined within the boundaries of discourse of the monoglot of his Tetralogy, the common denominators of which are numerous at all levels of organization, though very highly unobtrusive.

b. Text Constitution in **Samuel Beckett** is totally different: it lies in the close correlation between the English version and the French version, whatever the order may be. It is the sum total of devices which are common; to which one should necessarily add the devices that are different. Having a casual look at the typical Beckettian device of the M/W graphematic relationship, it becomes evident upon extensive examination of literary data (within the frame of reference of the super-device of Titling) that the lack of correspondence becomes a form of correspondence.

Not only that Beckett writes literary pieces which evince two originals—this in itself being an author-specific device—, but also these two texts ultimately become

one, precisely on account of the very disparities between them at absolutely all levels, ranging from language-specific to genre-specific.

Some of Beckett's characteristic devices are being generated by an inter-text—French-cum-English—(e.g. **How It Is / Comment c'est**), rather than by the somewhat simplistic intra-text Joyce-type of 'punning'. To put it bluntly, in order to KNOW—in the Beckett sense—a Beckett text it is not at all sufficient to be familiar with either the French version or the English version: let us call this the *entweder oder* approach.

I hereby advance that one major Beckett device is that it is imperative **for the specialist** to KNOW, in that special sense (very close to my definition of a FW-type of scrutiny), BOTH the French version AND the English version of the same text in order to obtain the total artistic image that Beckett the Craftsman aimed at (***Sans*** is complementary to ***Lessness***: the latter is in no way a translational replacement).

c. Text Constitution in **William Blake—**another Irishman!—is very different again, particularly if we choose for scrutiny and reader intake that part of a piece of fiction called *The Proverbs of Hell*. There, PROVERB becomes a Blake-specific device (anonymous, God-given, God-like...), with Proverb Sequentialization turning into another Blake-specific device (with opening and closing gambits, and recurrent climaxes); sequentiality violation leads to text disintegration, and becomes irrefutable proof of the centrality of Text Constitution for a reasonable fiction-theory.

4. Conclusion. A device-focused scrutiny of text constitution from an intake angle, rather than from a genetic one, becomes essential in the elaborate and delicate process of consistently describing fictional phenomena.



1991.

Joyce & Vico & Linguistic Theory

(This booklet was published by Colin Smythe of Gerrards Cross in 1991.)

Epigraphs

(James Joyce, 1922, *Ulysses*, 2.377.) History, Stephen said, is a nightmare from which I am trying to awake.

(Patrick Campbell, 1950, 'The Chatter of Clowns'.) The word *charade* is derived from the Spanish *charrada*, the chatter of clowns. Beyond that, charades have no connection with any kind entertainment, living or dead.

Thus, Ferdinand de Saussure gave his *Cours de Linguistique Générale* for the first time during the academic year 1906-1907, and faithful to a silence slogan, never published it in his lifetime. It was only published from the notes of his students, ten years later, in 1916; in spite of the war, it received immediate attention, and gradually, it turned into by far the greatest landmark of theoretical linguistics of the present century. However, according to testimonies, Saussure had started thinking intensely about the central ideas of his 1907 lectures as early as ten years before that date—around 1897—with a clear focus of attention in 1904 and 1905. Of the four major issues discussed by him throughout his lectures—(a) synchrony versus diachrony, (b) sign theory, (c) systems theory, and (d) '*langue et parole*'—the most important is without any doubt the first, as part of which he expresses his *exclusive* emphasis on the necessity of describing languages at one single given moment in time, preferably the present one. In consequence, it is more than certain that these theoretical topics, precisely in that order, were very much on his mind on Joyce's initial Bloomsday... Largely oversimplifying, the impact over the subsequent quarter of a century of his stand on those issues is reducible to two distinct statements:

(a) 'History is a real nightmare' (3)

(b) 'Linguists of all countries, awake!' .

Saussure's major achievement was the largely irreversible switch in theoretical linguistics from a diachronic approach, the paragon of which was Giambattista Vico and his *Scienza Nuova* (1744), to an exclusively synchronic approach, which was afterwards strongly reinforced in the thirties, forties and fifties. (The other three major points made by Saussure about semiotics, systems theory, and '*langue et parole*' fall outside the scope of this discussion.) To cut a vast subject short, Saussure is not so much a linguist today: he is rather a philosopher of linguistics. For there is a fundamental difference between the philosophy of language and the philosophy of linguistics: one is, in Saussure's terms again, a philosophy of the system, i.e, '*la langue comme système*'; the other—of the meta-system. Thus, his major contribution to general linguistics is methodological in its essence: how to view language from the most adequate angle is his supreme research task ('une vision (a) comme système, (b) comme système à un moment donné, (c) comme fait social').

However, it must be mentioned in passing that Saussure becomes all-important to Joyce studies with the publication of the 1984 *Ulysses*, quite Orwellian in both layout and theoretical approach: the right-hand page is intended in that edition to give the synchronous, complete and perhaps—why not—definitive text, whereas the left-hand page carries a text which is labelled by Editor Gabler as 'continuous' and is wishfully considered 'diachronic'. However, the notion of a 'diachronic text' is theoretically impossible within any frame of reference which considers itself genuinely Saussurean. As was stressed before, Saussure's theory refers to systems, not to linear structures, as is the case put forth by Hans Walter Gabler in his essay entitled 'The Synchrony and Diachrony of Texts: Practice and Theory of the Critical Edition of James Joyce's *Ulysses*'. The notion of diachronic linearization is totally aberrant within any twentieth-century model of linguistic description. Within the context of this discussion, it is a real pity that Joyce scholars do not read Saussure: it is equally a pity that twentieth-century linguists do not read Vico!

The publication in 1933 of the book *Language*, written by Leonard Bloomfield, only managed to reinforce the above-discussed point, which had been already made by Saussure right at the turn of the century. Even though he may have been little aware of Saussure, Bloomfield was indeed able to narrow it down to

(a) 'History **has been** a nightmare!', and perhaps
(b) (cf. FW 020.07) 'Gutenmorg Linguists with your Saussure charter!'.

Supporting evidence of the long-range impact of the Saussure 'Synchronic' turn-of-century statement came from scholars who may have never read him, such as Benjamin Lee Whorf. His articles—he never published a single book—stretching over a period of fifteen years, roughly between 1925 and 1941, managed to set up a new and fascinating—very Vico-like—branch of linguistics: namely, the theory that the structure of a language tends to condition the ways in which a speaker of that language thinks, thus establishing a clear correlation between Thought, Language, and Reality. Whorf's approach gradually came to be known as Semantic Relativity (or the Whorfian Hypothesis), and propounds the idea that, as has been said, the internal organization of widely different languages necessarily leads the speakers of those languages to view the world in different ways. The very important thing about Whorf, however, is that he manages to make his point without resorting to history. He, too, clearly implies, more on the method side, that

'History **would be** a nightmare!'

By the middle of the century, with Saussure far behind, the existence was established of 'mainstream' linguistics, overwhelmingly characterized by its being synchronic, i.e. history-free. This had been stated silently on Joyce's initial Bloomsday, then publicly early in 1907, and 'gutenmorgly' in 1916; then, of course, 'intuitively' endorsed by both Bloomfield and Whorf. The setting up of mainstream linguistics simultaneously and inevitably led to the existence by its side of non-mainstream trends, and that was the basket historical, or evolutionary, studies of language, quite of the Vico type, were relegated to. The emphasis was from then on exclusively placed on the present-day (the extreme case being recorded immediately after World War II of a book of American grammar exclusively based on the analysis of thousands of telephone conversations). The other cause that emphasized the mainstream nature of current research was the gradual, but profound, realization of linguists in most countries that they could in no way account satisfactorily and with scientific rigour for the complex phenomenon of language change.

Change in language can be described: it cannot be thoroughly explained, or minutely accounted for. It may well be that Saussure had sensed or intuited that problem too fifty years or so before scientific rigour in linguistics became what it is now. That is indeed the heaviest blow dealt at Vico studies within the context of language theories: for central to Vico's approach to language and history is the philosophical category of accurate and plausible reconstruction and reconstructibility of past change. Vico's main tenet, which is '*only connect*, especially at word level, *across*

time, and without methodological ceiling!', is of course more than vulnerable within the mid-20th-century theoretical frame of reference. It is the lack of *Wissenschaflichkeit* of the operation that ultimately led to the relegation of 'change studies' to non-mainstream linguistics; this relegation took place gradually in the years prior to World War II, but always deriving its strength from the central Saussure statement to the effect that the passing of time triggers the passing from one language system to another. In this sense, James Joyce was one of the last great minds to capitalize greatly from the process of 'reading Skeat by the hour'.

Then came the 'angry young men' of the mid-fifties: not only on the British stage, but also, and perhaps more importantly, for the philosophy of language, and linguistics. For it is in 1957 (cf. Kingsley Amis's novel *Lucky Jim*, published in 1954 (and filmed in 1957!), John Osborne's play *Look Back in Anger*, produced in 1956, and Sheila Delaney's kitchen sink drama *A Taste of Honey*), produced in 1958—all these three 'angers' happening in London, England...— that Noam Chomsky (a name invariably pronounced [homski] by Roman Jakobson!) publishes *Syntactic Structures*, the little book that contributed so much to upsetting things in language studies by setting other things up. Still another Angry Young Man? (It is perhaps quite worthy of note that John Osborne, the 'Father' of the Angry Young Men, was only one year and five days younger than Chomski himself.)

N. Chomsky focused, exclusively and absolutely, on syntax, brushing aside—in 1957—with formidable vigour and panache both the study of meaning and the totality of studies of historical change. He was the first after Saussure to be able to shout loud and clear—though quite in line with Saussure—but far more to the point

'History **had been** a nightmare!'.

And all the other bright boys after him, and ever since, have followed suit (to such an extent that one of the MIT courses dealing with the description of non-generative theories had, with due benediction from above, been nicknamed 'The Bad Guys'). It must also be said by way of digression that for Chomsky language is not 'un fait social', as it is most firmly for Saussure: for Chomsky, linguistics is only and merely a branch of 'theoretical psychology', a statement liable to undermine the sociological and primarily communicative foundations of language. It is curious to notice that neither Vico, especially in his joint definition of philosophy and philology (1744 : para. 429), nor Chomsky (1957, and 1965) need make use of the terms Diachrony and Synchrony, and indeed, they do not: the former because he places himself within an approach which is exclusively diachronic; the latter because his approach is

exclusively synchronic (it was only Saussure who had been a hybrid in his time). In other words, when Vico was alive and writing, the opposition between synchronic and diachronic had not yet emerged: everything was historical and evolutionary; whereas in Chomsky's time the opposition had long since ceased to be meaningful within mainstream linguistics. Ferdinand de Saussure had done his work in silence, exile, and cunning (even to the extent of leaving to others the task of writing his book for him!), and the second term of the opposition—that of diachronic—had been erased out of existence (the news of that phenomenon coming mainly from America before, during, and after the Great Depression)... In point of actual fact, Vico's complete definition of philology should really be 'the *diachronic* study of human words'...but then, why *human*?

In 1938, right on the eve of the outbreak of World War II, the philosopher Charles Morris had stated, in the wake of Charles Sanders Peirce, and, probably, quite independently of Saussure, that a semiotic system was necessarily made up of three components:

(a) Syntactics (dealing with unit, or item, arrangement);
(b) Semantics (dealing with unit meaning); and finally,
(c) Pragmatics (dealing with Unit Beaming).

'Semantics is reborn' within a totally history-free approach. Not only that they repudiate,—in the wake of Chomsky—the Vico-type diachrony, but which is far more serious, by virtue of their more than exclusive emphasis on **sentence** semantics, they manage to push the Stephen Ullmann type of **word** semantics definitively out of existence within mainstream linguistics. It is around the same date—in the early sixties—that Joseph Greenberg publishes the results of team research dealing with the universals of language. It is Greenberg of them all who perhaps comes closest to Vico in being the first in late twentieth-century linguistics to take into account a wide, wide range of languages, the way Vico did (for, after his Ph.D., Chomsky never dealt with anything else but English!). Greenberg practically retains within the scope of his research absolutely all the living languages of the world. But then, his method is derived from Chomsky's theory, and ultimately from Saussure (though no American, except Jakobson, ever even alludes to him!): he, and more than three-quarters of his fellow-researchers, look at all languages (irrespective of genetic affiliation) at one single moment in time—usually the present moment (4). Further, they look at what all these languages have in common, never at what they have different: viz., it is the synchronic universals that are being taken into account, not the diachronic

differentials. The notion of language universals is now a household term in present-day linguistics, though not at all thanks to Vico; however, the notion of language differentials—essentially what both Vico and Joyce were primarily interested in—continues to be sheer heresy. This is ultimately explainable by two facts: first that the practical aim of the theory of universals is to obtain a universal grammar, and secondly, that semantics still remains subservient to syntax.

In 1967, H. Paul Grice gives his famous William James lectures at Harvard, one of which is entitled 'Logic and Conversation'. Very much like Saussure, Grice is reluctant to publish the text, and for eight solid years it circulates underground, in mimeographed form, among the academics—linguists and philosophers alike. It is published only in 1975. The essay in question is concerned neither with syntax, nor with semantics: instead, it brings the issue to the heart of all Modern Fiction, as it establishes pragmatics as a major branch of language studies, and gives pride of place to conversation, and the complex relation between successive speakers. With Grice in 1967—or is it 1975?—

'pragmatics (as envisaged by Morris) is born for the first time ever'.

Thus, by implication, and quite in keeping with the Viconian cycles, Grice negates history, not unlike Peter in the Bible (Matt. 26.34):

'History **would inevitably have been** a nightmare!'.

It further represents the rejection of both word- and sentence-linguistics, and the orientation of the theory towards discourse, and more particularly question-and-answer Analysis. For in addition to laying the foundations for the first time ever of pragmatics, philosopher H. Paul Grice manages, through a slender paper which stayed unpublished for eight years, the astonishing feat of overruling Chomsky: in fact, he shifted the focus of theoretical attention from the sentence onto a unit of linguistic analysis larger than the sentence, namely that of Discourse (which is, potentially and strictly relationally, defined as a 'multi-sentence').

Discourse is a conglomerate of sentences in exactly the same way a casual conversation, a short story, or even a full-fledged novel, say, *Ulysses* or *Finnegans Wake* for that matter, are conglomerates of sentences. And discourse is a theoretical construct Giambattista Vico never even dreamt of coping with. Further, it is a language unit which proves for the moment to be totally intractable historically.

The latest major development occurs in 1985: Pieter A.M. Seuren of Oxford publishes a 500-page book devoted to discourse semantics, thereby reinforcing the emergence of discourse analysis as an independent branch of linguistics, which is vigorously pushing its way towards mainstream research. It starts another Viconian cycle, coming closer than ever perhaps to a rigorous analysis of experimental fictional prose (5). Having completed a set of symmetrical Viconian cycles, the three components of which were predicted by Charles Morris as early as 1938, theoretical linguistics is now ready for the *post-1984 Ricorso*. Though it is true that Vico's contribution to current linguistic theory remains yet to be made, it is equally true that cyclic development is omnipresent within the meta-system, as has been amply demonstrated above.

Having so far defined Vico's philosophy of language as exclusively diachronic, and late twentieth-century linguistics as exclusively synchronic, I wish to launch the idea at this stage that James Joyce's approach to language was neither synchronic nor diachronic, but rather panchronic, cutting right across the Saussurean opposition. Ferdinand de Saussure does use the term panchronic:

> (1969 : 135) En linguistique comme dans les jeux d'échecs, il y a des règles qui survivent a tous les évènements. Mais... des qu'on parle de faits particuliers et tangibles, il n'y a pas de point de vue panchronique.

The brief discussion then concludes with the linguist's final verdict:

> Le point de vue panchronique n'atteint jamais les faits particuliers de la langue.

It is at this very point that Joyce **achieves** the unenvisageable in his *Finnegans Wake*: the cancellation of the distinction between the particular and the general, obtained by means of a radical reassessment of the relation between Type and Token, carries with it the fundamental modification in the balance between what is synchronic, and what is diachronic. Everything in Joyce's use of language becomes diachronically synchronic, with the reverse being also valid. What Joyce was actually doing with language decidedly as a non-philosopher, but most certainly as a consummate artist, could perhaps be more adequately accommodated in Whorf's theoretical model, on the next-to-impossible condition that the approach is supplemented by a historical-cum-evolutionary component. For Joyce's major achievement in *Finnegans Wake* is that by adopting a panchronical attitude towards language (and the use of language), he manages to transcend not only the

synchrony/diachrony opposition, but also, more importantly, the phenomenon of language change. All languages change: not *Finnegans Wake*! The words therein almost cease to be human: it is at this point that Vico was quite right when he spoke about 'human words' in his conjoined definition of philosophy and philology...

Having focused almost exclusively on the synchronic/diachronic distinction, which radically separates Vico from present-day linguistic theories, the present discussion remains merely a very introductory one: for it is the essence of panchronism as embodied in Joyce's later work that constitutes the substance of the discussion. His debt to Giambattista Vico is immense, but it is by no means as straightforward (particularly for the more than many Joyce scholars who have no—or next to no—languages other than their own!) as many may assume. This study has only pointed to just one of the major stumbling-blocks: let us provisionally label this only one item, the 'Time-in-the-Weltanschauung'.

Notes

1. Quite the opposite of E.M. Forster's *Only Connect*, this epigraph by Anglo-Irish humourist Patrick Campbell is intended to change the false impression given by Vico whenever he discusses etymologies (e.g. Paragraphs 370, 379, 386, etc) to the effect that the process of going back in time via etymologizing is obviously open-ended. It is not. The essence of this epigraph could be technically paraphrased as follows:

Beyond synchronic state N, x has no connection with any kind of y, be it on grounds p or q.

This should almost be taken as an axiom, the main function of which is to avert the dangers of over-etymologizing; Vico does not seem to have been aware of such dangers, which are not—in the last analysis—so very remote from Wittgenstein's 'We cannot think what we cannot think' (*Tractatus*, 5.61).

2. The philosophy of language is, obviously, quite distinct from the philosophy of linguistics: whereas Vico deals overwhelmingly with the philosophy of language, the main focus of the present study is on the philosophy of linguistics. Joyce himself was inherently interested in neither: he only paid attention to what fired his imagination as an artist.

3. ‘History is a nightmare from which I am trying to awake’, is Stephen Dedalus’s epiphany-like memorable statement uttered in the third episode of *Ulysses* at 2.377, the one concluding the introductory part. The extent to which the phrase is applicable to Joyce himself should be viewed in the light of the panchronic discussion as sketched in the last but one paragraph of this study.

4. Starting from D.P. Verene’s discussion of Vico’s philosophy of the imagination, it is worth stressing that the Viconian definition ‘every metaphor is a fable in brief’ (Paragraph 404) is a diachronic universal.

5. This argumentation is built on the future-oriented assumption that language studies and literature studies are one, just as they were in the time of Vico and Saussure: the present chasm between them, artificially created by the advent of the generative approach, does not seem to be long-lasting. Proof thereof is the sustained interest in discourse and text. Properly oriented Joyce studies may indeed complete the Viconian circle.

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The Beckett Silence: A Semiotic View

(Paper given at the International Symposium "Beckett in the 1990s", which took place in The Hague between 8 and 12 April 1992.)

Abstract

0. Epigraph

sssh!
(from Beckett's *Film*)

1. The basic assumption is that the Humanities, and consequently the Theory of Literature, are to an equal extent in need of closely correlated theoretical constructs, approximating a philosophical system: the paradox is that what is a commonplace in the Exact Sciences is downright heresy in the Humanities.

2. Operating at meta-level is the construct of territory (coming from Ethology): the writer, and unfortunately the Critic too, inevitably move within a given Territory, concretely marked in the same manner in which the Painter physically constructs his canvas; to continue the analogy, the creative writer's palette is not a support for bits of colour, but rather for (a) bits of language(s), and (b) BITS of information, in the sense given it by Communications Studies.

3. It is in the attitude towards Language & Information that Beckett (and Joyce) are inherently different from all previous writers, and all other writing: considering them together with the rest is the error of the Critic. The idea of a 'silent' writer, and consequently **a silent piece of writing** (see both writers' credos), cancels all traditional assumptions in **Discourse Analysis**.

4. Defining the creative writer as a discourse-producing individual leads one, in the respective cases of Joyce & Beckett (cf. slogans 'SILENCE, exile, and CUNNING' vs. 'there is NOTHING TO EXPRESS'), to the important construct of Silent Discourse, which is an oxymoron; it is clearly embodied in Joyce's FW as well as in most of Beckett. The reason at this stage for Joyce & Beckett standing quite apart and away

from all fellow-writers is the deliberate introduction of Explicit Silence into world literature, as a Discourse Presupposition (in the Frege sense).

5. The following three questions are offered here for further consideration within the present Fragestellung Approach (adopted mainly for limitations of time):

(a) What IS SILENCE? (there are several STRONG as well as several WEAK options in the complex process of defining it)

(b) What is the specific range of a possible Typology of it?

(c) What is the fundamental difference between Joyce's Silence and Beckett's Silence?

6. CONCLUSION. The constructs of—

(d) Silence-in-the-Absence-of-the-Communicant(s) (or Communicators),
(e) Silence-in-the-Absence-of-the-Word,
(f) Silence-in-the-Presence-of-the-Word,
(g) Silence-in-the-(Genre-induced)-Presence-of-the-Public,

would be central in merely beginning to outline some kind of tentative answers, open as they may be to controversy, regarding the Questions (a), (b), and (c).

7. N.B. The inquisitive analyst would also be in need of the category of Literary Device, which I develop elsewhere.





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Holograph list of the 40 languages used by James Joyce in writing *Finnegans Wake*

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Executive Advisor
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